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Celata virtus.—HORACE.

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ORIGINAL COMMUNICATIONS.

Biographical Sketch of Samuel Paul Choppin, M. D.

De mortuis nil nisi bonum, is the popular dogma; but we have always been a dissenter. A well written biography is a poem, for the life of every man is more or less a poem. If it is well (and it certainly is well) to write of the good that men have done, of the virtues they have illustrated; it is also well (aye, it is necessary) to write of the reverse. Good shines brightest in liberal contrast with bad. We would be hopelessly shocked at the country that could produce a Verres, if we did not know that the presence of Verres ceased to be tolerated in his country. Unsatisfactory as history is, it would hopelessly fatigue if the contrast of good and bad were not continually held up before us. History itself is but a grand poem of humanity, and its grandeur would be obliterated if it sought to mould into form angelic every human actor who has passed away.

No, there have been, and there are to-day, good, bad and indifferent men; as well as great, small and mediocre men. God hath made us so, and we shall never know otherwise. It is the organization of society, and it is but ordinarily philosophical to bow acknowledgment. The recorder of the evil deeds of Nero, or of Phillip the Second, is as worthy, then, of our gratitude as is the recorder of the virtues of Washington.

What hope is there for our sons, if, when a bad man dies, we stand in the rostrum or the pulpit and harangue the multitude about such virtues as he may have exhibited, and if some one cries, "but he was a thief, or a liar, or an usurper," we hold our finger to our lips, and say, "Tush! *De mortuis nil nisi bonum?*"

The humblest man who lives a life cannot slip into the bosom of his mother earth without having left more or less of impress. He may have scarred or embellished, but impress he leaves.

Do you want men better than they are? "By all means," is the universal chorus. Then away with the fatal dogma. Hold virtue and worth up mountain high for admiration and example; but hold vice and corruption and worthlessness as high for continual detestation. Any other education of youth is vicious.

The corpse encased in highly polished metal and plate glass, covered with rare flowers, accompanied by the dirge of drums and trumpets, and followed by long lines of carriages—this corpse carries with it nothing that, when living, it has done, or said, or thought here; all its evil and its good live behind it. The seed were sown in a fertile soil, and they shall multiply apace; but the bad seed faster than the good.

It is a natural and an increasing demand, then, that there shall be biographies of the bad, and society is at last as deeply indebted to him who points to bad as to him who points to good.

And yet it is far more grateful to write of a well-spent life than of the reverse. The one may be said to be stern duty's task; the other a mournful pleasure. Neither can reach, to shock or cheer, the dead in the great hereafter to which they have been summoned. Both are at last for the living and for those yet to live.

The subject of our humble sketch, Dr. Samuel Paul Choppin, was born on the 20th day of October, 1828, in the parish of West Baton Rouge, Louisiana. His father, the late Paul Choppin, was a native of Macon, Burgundy, France. His mother, who survives him, was Elizabeth Sherburne, daughter

of Samuel Sherburne, American Consul at Nantes. She was born at Lorient, a sea-port in Brittany. Samuel Sherburne, of Portsmouth, New Hampshire, was descended from the Sherburnes who settled in Portsmouth in 1612, and these were descendants of the Sherburnes of Stonyhurst House, Aighton, Lancashire, England.

At six or seven years of age, Samuel P. Choppin was placed in the preparatory school of the late Dr. Lacy, of Baton Rouge. It was while a school boy at Baton Rouge that he and Dr. C. Beard, of this city, first met, and that intimacy commenced which afterward ripened into friendship that is not often found existing between men who have no ties of blood.

From Dr. Lacy's school Choppin was sent to Jefferson College, parish of St. James, La. This was at a day when the college was thronged with students, and when it was in the hey-dey of its popularity. In 1846, at the age of 18, he graduated in the college.

Soon afterwards he began the study of medicine in the office of the late Dr. Enders, of Baton Rouge. Thence he came to New Orleans and entered the Medical Department of the University of Louisiana. While pursuing his studies here he became resident student in the Charity Hospital, and it was here that we first made his acquaintance. This was in the early spring of 1848. We had graduated in Philadelphia a year before, had then studied for and entered the United States navy as Assistant Surgeon, but, being ordered to land duty, resigned and came to New Orleans—"hanging out our shingle" in January, 1848. Often in after years have we talked over those days, and many a time has he told us of what he then considered our great temerity, in attempting at so early a period to teach at the bedside. The fact is that before we graduated in Philadelphia, it had long been a part of our duty, as an advanced student in a private Obstetric School, to assist in teaching the juniors. In this way we acquired a taste for the business, and as soon as we were appointed visiting physician to the Charity Hospital we began to teach our ward student. This student was a very worthy, ambitious and intelligent young Irishman, who had had the misfortune to lose a leg and

who hobbled around on a rude wooden peg. Often has he entertained us with the picture of the success he was to achieve in medicine, and among his fondest dreams was that of possessing a perfect artificial limb. The old peg was good enough, he said, for a student of medicine, but when he should be called to the bedsides of the *élite* the thing must be more in due form.

What a strange world to be sure! There we were, filled with ambition ourself, lecturing to our ambitious wooden-legged student, and young Choppin laughing at both of us—at ourself for lecturing to what he called a half of a man (our limited reputation failing to attract a whole one), and at the half man for listening to one so young and obscure. Shift the scene, and look again. Domestic affliction laid its heavy hand on our student soon after he stepped on the threshhold of life. In disgust he went off to South America, hoping to drown sorrow and achieve fortune. The next we heard of him he had committed suicide. The volatile Choppin became himself the grave teacher, and we sit here to tell that both are dead.

Yes, young Choppin was as full of fun as any medical student who ever wielded a scalpel or "stuffed" for an examination; but he was intelligent and ambitious, and he profited largely by the opportunities offered in the great old hospital—the freest, the most liberal that ever student of medicine set foot in. Although we had graduated ahead of him we came to know him very well, and it was clear that he was made of the stuff that turns out real men.

In the spring of 1849, he received his degree of M. D. at the hands of the Faculty of the Medical Department of the University of Louisiana, and immediately thereafter he set out for Paris. Here, again, while certainly enjoying life as fully as the heart could desire, he was the assidious student of medicine, and he won the real esteem of such men as Ricord, Cazeaux, Broca, Velpeau, Chomel, Louis, Cazenave, Roux, Piorry, Bouillaud, Barthes and Roger, etc. The names mentioned show that the schools of Paris were at the height of their brilliant reputation; all that was then known in medicine was to be learned there, and our young friend availed himself freely of the knowledge of his great masters.

It was during his stay in Paris that Dr. Choppin became the close student of Ricord, and gave that thorough attention to his specialty which enabled him, soon after his return home, to take the first rank as a syphillographer. In the whole range of medical studies in Paris he had the great advantage of being a thorough French scholar, and the exhaustive "Notes on Syphilis" which he took from the lips of Ricord and afterwards translated and published in a series of numbers of the Medical News and Hospital Gazette, of this city, do great honor to his illustrious teacher and stand as the best of his own literary work. We really believe that the student of to-day can study these "Notes" with more profit than he can any of the more recent books on the subject.

Dr. Choppin was in Paris at the time of the great "*Coup d'Etat*" of Louis Napoleon in 1851, and he had a narrow escape from the grand massacre on December 2d of that year. He was walking along the street quietly with a friend, Dr. Metcalf, of Natchez, when all at once they found themselves in the midst of a dense crowd on one side of the grand boulevard. There was no apparent excitement in the crowd, composed of unarmed men, women and children of all classes, the general attention being directed to a battalion of infantry that was filing along the opposite side. Suddenly the command was given to halt and fire, and, without any warning, volley after volley was poured upon the dense mass of defenceless people. Of course with the mass it was *saure qui peut*. Dr. Metcalf threw himself flat on his face, and Dr. Choppin unceremoniously jumped through a window into the shop of a green grocer, and never stopped until he was safely stowed away up-stairs. Both came out unhurt, but not so with a very worthy young Alabama professional intimate of theirs, who was caught in the same crowd, and was badly wounded.

Dr. Choppin returned from Paris in 1852, and soon thereafter he was elected Resident Surgeon of the Charity Hospital, and he and his friend, Dr. Beard, who had been to Europe with him, were also appointed by the Faculty Demonstrators of Anatomy in the Medical Department of the University of Louisiana.

The position of House Surgeon he held until October, 1857, when he resigned in order to assume the responsibilities of married life. The position of Demonstrator he held until the summer of 1856, when he and Dr. Beard, having joined other gentlemen in the establishment of another medical college here, both resigned.

To say that Dr. Choppin fully availed himself of the unrivalled advantages afforded him by his long service as chief medical officer of the Charity Hospital, is not saying one word too much. He introduced great improvements in all the branches of the institution, made it a much more agreeable and profitable resort for medical officers and students, and cultivated its illimitable material for his own advantage. It was here that he indulged freely his predilection for surgery while faithfully cultivating other branches, so that long before he resigned the position his opinions and his ready and skillful hand were sought after, and when he opened his outside office he at once entered upon a liberal practice.

While surgeon of the Hospital, Dr. Choppin, in conjunction with Drs. C. Beard, R. Schlatre and Gilbert Vance, started the publication of a weekly medical journal called the *New Orleans Medical News and Hospital Gazette.* The four young editors were intimate friends, all had received liberal preliminary education, all had graduated in medicine in this country, all had been together as students of the medical schools of Europe, and all had come back filled with the just ambition to succeed. Dr. Choppin's success is now history; Dr. Beard has long stood at the head of Oculistry in the South; Dr. Schlatre married early and became a planter; Gilbert Vance died very early.

And may we not be allowed to stop for a moment here and drop a tear on the tomb of poor Gilbert Vance? He was a genial, whole-souled fellow as ever lived, and one of the brightest men New Orleans ever produced. Young as he was when he died, he had made deep impress on the minds of thinking men, and had he been spared for even a reasonable lifetime, New Orleans would have been proud of him. To his intimates he was a sad contradiction. He was always sick and always

witty. Humor always triumphed over disease. Nothing escaped him. One moment he would percuss his own chest and then reckon his probable days, and the next moment his wit or humor would provoke peals of laughter. One day he stood in the door of a back office, Dr. Beard had just opened at No. 5 Carondelet street. With a husky voice, which told of the destroyer that was on him, he said:

"Beard, what fool painted that sign of yours at the front door?"

"What is the matter with it? I am sure it is very handsomely executed," said Dr. Beard.

"Oh! it is very well gilded and painted, but the finger on the sign points the wrong way. It points *to* your office, whereas, after you are done with your patients' eyes they will much more require the sign to get out."

The journal established by these gentlemen was a very spirited and interesting one, and it existed under their successive charge for a number of years, being suspended only on the breaking out of the war in 1861. It was in this journal that Dr. Choppin's notes on Syphilis appeared.

In the spring of 1856, the late Dr. E. D. Fenner and Dr. D. W. Brickell, conceived the idea of establishing a second college of medicine in New Orleans, and the first persons they invited to their conferences were Drs. S. Choppin and C. Beard, the former to take the chair of surgery, the latter that of anatomy. Both of these gentlemen accepted the offer made, and this involved the resignation of their positions of Demonstrators of Anatomy in the University of Louisiana. From the beginning of its career in the fall of 1856 the New Orleans School of Medicine (the new college) was a success. It opened with a class of seventy-six students, and its last class, at the beginning of the war, was two hundred and sixty-seven. It found New Orleans possessed of medical facilities fully equal to any in the world, with an annual average of only 150 to 175 students. When the war broke out in 1861, there was an aggregate in the two colleges of largely over 600 students, and New Orleans was the medical centre of the South. So

much for honorable industry and rivalry in one of the highest of pursuits.

Dr. Choppin was a very popular teacher. Personally, his pupils were very fond of him, and his clinics were largely attended. He disliked didactic lecturing, and never could acquire a taste for it. We always attributed it to a want of confidence in himself, which made him write out his lectures instead of delivering them extemporaneously. But put him at the bedside, or in the hospital amphitheater, knife in hand and his subject before him, and he was content.

After the war ended, Dr. Choppin and those of his old colleagues who remained reopened the school, but, on account of business reasons, under the name of the Charity Hospital Medical College of New Orleans. This was under Democratic rule, and all things promised well for several seasons. Then came the dark pall of Radicalism, which blighted everything, and the doors had to be closed.

But it was not intended that the life of this energetic and restless spirit was to be spent in the single routine of professional practice or teaching. With the breaking out of the war he entered the Southern army as surgeon, and was at once taken on the staff of General G. T. Beauregard. Here he became not only the trusted medical officer and organizer of this distinguished commander, but the warm personal friend besides, and he followed his fortunes in camp and field and post, in Virginia, Carolina, Tennessee, Mississippi, everywhere where duty called, and during the entire four years' struggle. In all this time he grew stronger day by day in the personal and professional estimation of the vast number of medical men with whom he came in contact, and so many of whom from his high position he was called on to control. We were in the army at the same time, and we can truthfully bear witness to the fact that we never heard him spoken of by general officer, line officer, medical officer or common soldier, except in terms of profoundest respect and admiration. As superior officer he was exacting, but he was kind and just; to the sick and wounded, whether at the bedside with counsel, or at the operating table knife in hand, whether for officer or

common soldier, he was reassuring, cheerful and kind as a woman. A common soldier in my hospital once told me that he saw Dr. Choppin steadily amputating the limb of an officer while the tears were trickling down his cheeks.

To Dr. Choppin the army was not only the post of duty. In it he served his country thoroughly, and the cause of humanity could exact no more of him than he gave; but this was not all; the sickness and wounds amid which he daily and hourly walked constituted an exceptionally grand school of experience from which he emerged with full profit, and he resumed the peaceful practice of his profession riper in all that suffering humanity needs of aid than many who live doctors up to three score and ten.

History teaches us that in all ages of civilization, notwithstanding the theory that the calling of the medical man is one so thoroughly peaceful that he should have no active part in politics, nevertheless politics has often commanded the attention of the most exalted medical men, and that most properly. And when we come to look at the subject calmly it is almost necessarily so. The highly educated physician or surgeon is a reading and a thinking man, and withal his very calling keeps every sympathy in active play. It is hard to concieve, then, of such a man being a sluggard or a drone in crises which involve personal liberty itself. Perforce this grade of men find themselves engaged in all great revolutionary movements, and there are no more reliable or valuable class to be found.

In the protracted struggle against the despotism of radicalism in Louisiana Dr. Choppin was always found taking a prominent part, and he was one of the very few who really organized the revolution of September 14th, 1874. He was appointed by the great meeting on Canal street one of the committee who visited Kellogg and demanded his abdication, and when the abdication was refused he was among the first in armed resistance.

But we return to his peaceful career. When Governor Nicholls was put at the head of the State in 1876 he organized

a new Board of Health for New Orleans and Dr. Choppin was elected President for the same. In assuming this position Dr. Choppin had high aims, and little did he dream of the care and trouble that was to ensue. He had lived here for many years and had thorough knowledge of the utterly loose and sometimes corrupt manner in which this important branch of the public service was conducted, and his ambition was to organize a total change and thus effect much in the way of improvement of the health of the city—more especially in regard to the re-occurrence of yellow fever. His career as President of the Board has now passed into history, but the people of New Orleans do not know fully the purity of his motives in office, nor the circumstances that surrounded him, and perhaps there is no fitter place to record the same than in this little sketch of his life.

As soon as we heard that he aspired to the office named, warm personal regard impelled us to seek him and to beg him not to undertake the task. We went into his office one day, and, locking the door behind us, told him we had come to have a serious talk with him. About this dialogue ensued:

C.—What are you locking the door for? Are you going to murder me?

B.—No, I have come to talk business, and I do not wish to be interrupted. I want you to renounce your intention to serve as President of that Board of Health.

C.—Why, B.? I think I can effect great good for our city and State, and I am ready to do the work.

B.—Your motives are good and laudable, but the labor and mental trouble will be great and your health is not vigorous enough for the undertaking, seeing that your professional practice is very large and absorbing.

C.—Is that all?

B.—No, that is not all. You are going to undertake the impossible. You believe that yellow fever never originates here—that it is always brought here—and you expect to institute a system of quarantine which will be thorough and complete. Your premises are defective.

C.—Do you believe yellow fever ever originated here?

B.—Yes, I am sure I have, in my residence of thirty years here, seen it originate here more than once.

C.—Don't you believe that it spreads when brought here?

B.—Yes, sometimes. It will do so if all conditions exist for its propagation. But I have seen it utterly fail to spread when brought here in its most virulent form—notably so when in September, 1862, it was brought here from Nassau through Butler's military quarantine.

C.—Well, if you admit that it will sometimes spread when brought here, then I will establish an absolute quarantine and prevent its being brought in.

B.—That is just what you can't do.

C.—Bah! Why can't I?

B.—Because man is not honest enough to quarantine himself. You must make him over before he will be. You are, for the sake of argument, all right; but you have your little army of employees, all of whom must fully sympathize with you, and all of whom must be thoroughly trustworthy. You will be deceived, for, despite all efforts to the contrary, politics will dictate more or less of your subordinates. Then quarantine directly interferes with large business interests, and, however freely a community may *talk* co-operation, you will find yourself antagonized at every turn. If you will quarantine to suit business, all right. If you quarantine to suit your conviction of the interest of health, then all wrong.

C.—Then you do not think real quarantine practicable?

B.—I do not. I will undertake to break any quarantine on earth. Simply make the pecuniary inducement sufficient and I'll send a man through any quarantine. Did we not see the boasted quarantine of Butler broken by money in 1862—letting a man from Nassau come through with the fever on him to die of black vomit in the heart of our city? And do not you and I know that if Butler had known of it he would have shot all concerned—even the patient himself?

Mind, I am not saying that *absolute* quarantine may not keep yellow fever out of a given place. For the sake of argument I'll admit it. But you can't have absolute quarantine, and the man who attempts it here will be hunted down by all in interest

of the reverse. The community you would faithfully serve have been for years humbugged to death on this subject. Especially in the past few years have they been utterly humbugged, and they believe that long immunity from yellow fever is the result of efficient quarantine. They are badly educated on the subject and you will suffer for it.

C.—Well, if yellow fever does slip in, we can control it with disinfectants. These days we are ahead of Yellow Jack.

B.—Ah! my friend, here you are at fault again. You have no experience in curbing Yellow Jack. You believe, I know, all that has been said and published by your predecessors in office. I don't believe any of it.

C.—You don't believe that for several seasons here the Board of Health has succeeded in fencing in or stamping out yellow fever with carbolic acid? Oh! you are too skeptical. Those are official reports of the most reliable kind, and they are attracting the attention of the world.

B.—I don't care if they are official; they are utterly incorrect. The difference between you and me is, that when these fencing and stamping operations were going on you took the say-so of officials, whereas I followed, day by day, the officials in their work, and I know that the facts are the reverse of what they reported.

I am not impugning the veracity of the observers and reporters. I simply contradict and condemn their conclusions. Carbolic acid in their hands was just about as potent to control yellow fever as water. It never did for one moment stamp out or fence in the disease. They did not recognize the fact that they were dealing with the disease in localized form—that is, where only in a given part of the city existed the conditions essential to its propagation.

On this subject of carbolic acid, let me point you to the rock on which you will wreck. This community has been educated for several years to believe that carbolic acid is master of yellow fever. For that reason, if the fever appears you must use it. But you believe in it too, and for the two reasons you will use it thoroughly. If sporadic cases occur, like your

predecessors in office you will immagine that you have prevented an epidemic with carbolic acid, and the public will simply give you credit for repeating what your predecessors taught you. But look out! Nine years have passed without an epidemic. We are coming closer to it. It will be here soon. When the fever starts in such a season carbolic acid will be as futile as ever. Cologne will be better, because it will not stink. You will, in your faith and energy, use carbolic acid more freely every day, and every day the fever will spread and defy you. Still you will fight it with carbolic acid, until there will be a universal howl against you for infecting rather than disinfecting the city;—I dislike to paint such a picture, but so it will be.

I made no impression on my poor friend. He accepted the presidency of the Board of Health, took up arms against yellow fever, fought with desperation, and was vanquished completely in 1878.

But this was not the worst of it. He was betrayed in office where he trusted; yellow fever was let to pass through quarantine; he was tormented hourly by those whose business interests were interrupted, and he was betrayed here where he trusted; he was assailed by the press with a milignancy that was amazing, and denunciation faced him everywhere. He was even openly charged with causing deaths by yellow fever, because the atmosphere smelled of carbolic acid. Unthinking men, who but yesterday were worshipping at the shrine of carbolic acid as the master of yellow fever, now that Dr. Choppin, in his zeal, was absolutely demonstrating its worthlessnes, were to-day ready to hang him for using it. From the minions of those whose business interests were interrupted by quarantine he received letters on letters, in English and in French, threatening his life.

But Dr. Choppin was never dismayed. No man possessed more of zeal or genuine courage than he did, and he never wavered in his efforts. Theoretically at variance with him, we nevertheless admired the good faith and tenacity of the man. He felt that his purpose was high; he had staked himself, and he never wavered. He nearly killed himself in the

struggle, and pecuniarily he sacrificed six times the salary awarded him by the State. Of course there are very many of those who denounced him without thought, who have long since regretted it, and we know that he had full forgiveness for them all; but not one who systematically and unrelentingly assailed him will ever do for the cause of humanity what he did or what he wished to do. And why? Simply because the fight for humanity is a fight against human nature, and the reward is not while the unselfish warrior lives.

But the limits of the journal for which we write warn us to come to a close.

While it is clear that Dr. Choppin came to New Orleans a well-bred and well-educated young gentleman, it is true that he had neither the force of friends nor of money to push him towards the goal he would reach. In himself alone was the power to be found. He was prepared by his father for the race, but the running he himself had to do. And he was a notable instance of what innate energy and determination will accomplish. In medicine he was generally accomplished, and he had always a firm hold on society as a general practitioner. But surgery was his preference, and as a distinguished surgeon he was widely known. This branch of practice he commanded far and near. We do not stop to speak of the number or of the variety of operations he has performed. It may safely be said that he has done nearly everything in surgery, and his work was always well done. He was a brilliant operator, but he was better still—he was an intellectual surgeon. His own mind was clear as a bell, and he was conversant with the views of the great authors. Hence his diagnostic powers were ample. He himself regarded surgery of the brain as having precedence of that of the hand. He liked to operate when it was necessary, but he did not like operations sufficiently well to do so unnecessarily. More than once have we known him forego the ready and handsome fee because he knew the operation either promised nothing or worse.

In his intercourse with men he was most affable and pleasant, at the same time that he was known to be punctilious and quick to resent wrong. No man ever achieved higher social distinction here.

At the bedside he was always cheerful, reassuring and ready with resources. He quickly perceived what was needed, and he carried his point by force of the confidence that was in himself and that was always felt by others in him. We can say without exaggeration, that he was really loved by his clientelle.

He was a firm and reliable friend, when friendship was to be tested, either by purse or hand, and he was far too generous for his own good. For purposes of charity he was never appealed to in vain. Indeed, he had never learned the great business lesson of how to say *No!* He appreciated fully the honorarium due him for professional services, but those unable to pay him never appealed to him in vain for the highest services he was capable of bestowing. The immense cortege that followed his remains to the grave—from the richest to the little inmates of the orphan asylum—attested the hold he had on the heart of society. The great and good physician, as well as the useful and obedient citizen in every legitimate test of true citizenship, was going to his last rest, and the heart of every good man, woman and child throbbed—Well done thou good and faithful servant!

He was a man of naturally strong constitution and iron will, but the last eighteen or more years of his life were spent at a time that in many respects, public and private, tries fully the stuff of which men are morally and physically made, and he did in every way the work of several men. As we have seen, his last public work was most harassing and trying, and his friends could see what his own pride would not let him admit —that he grew rapidly older under its influence.

He was in our office on Thursday, April 29th ult., laughing and joking as usual, though saying that his morning's work had fatigued him more than usual. At 10 that evening he was taken sick, though, not appreciating his condition, he would not call for professional aid until next morning. Then he was found to be the subject of pneumonia of a grave character. Remedial measures utterly failed, and at 8, P. M., Sunday, May 2d, he passed into his last sleep on earth.

Dr. Choppin first married Miss Selina Roberts, of New Orleans, a most charming and estimable young lady. She

died early, leaving him one son, Sherburne, who survives him and is studying the profession of his father. In 1862, during the late war, he married Miss Amelia Metcalf, of Natchez, a lady of high standing and lovely character. She and a daughter of 12 years survive him. The loss these three have sustained is immeasurable, for their mainstay has been torn from them at a time when all most needed him.

Poor, dear friend! Through long, anxious and busy years have we trod life's tortuous path together, pursuing the same calling, and sharing largely the pleasures and pains of the journey. Eternal rest is now thy portion, while we are here to toil on. Sweet memory travels with us in the daily round. Personal communion is denied, but we have come to the door of thy tomb with this handful of flowers gathered by the wayside. They will wither too, but they bear the grateful perfume of friendship that never dies. B.

Gastrotomy Performed to Establish a Permanent Fistula in Stricture of the Œsophagus.

By Dr. HERFF, San Antonia, Texas.

Tracheotomy and gastrotomy are both very ancient operations and accounts of them can be found in the oldest historical record of surgery.

Both operations had a similar fate up to within the last forty years—they were looked upon with reserve, disgust, very rarely performed and even then almost against the predominant current of medical opinion. Tracheotomy has at last conquered the old prejudices, while gastrotomy still labors under an undeserved stigma.

Both operations are indeed performed under two very similar indications:

1. Removal of foreign bodies.

2. For the establishment of a temporary or permanent canal by which the physiological functions of œsophagus and trachea, introduction of food and ingress of air, are restored when insurmountable obstructions exist.

In regard to the extraction of foreign bodies, gastrotomy has now been received as a legitimate operation by the surgeons, and is only rarely performed, because there is rarely any indication for it.

It is different in regard to the second indication, and the records of cases where gastrotomy was performed for the relief of strictures, are very little encouraging up to within the last few years.

The cause of those failures, however, must not be looked for in the operation itself, but in the method of execution and in the neglect of antiseptic treatment.

Formerly, the operation was performed in one act, that is the walls of the abdomen and stomach were opened on the same day, either with or without uniting previously the viscus to the external incision. In that way it was next to impossible to prevent gastric fluid or even liquid food escaping into the cavity of the abdomen, and still more difficult to produce quick agglutination of a wound, which was constantly exposed to the decomposing influence of the contents of the stomach.

So it must not astonish us, that up to 1875, when Verneuil performed his first successful case, only one patient out of thirty-one survived the operation forty days.

Since then the results have been more encouraging, and up to 1878 I can find eight successes out of fifteen cases, while Howse, the originator of the best method had actually no death attributable to the operation in six consecutive cases.

I do not deny, that Verneial and others were successful by adopting a plan not much differing from the old plan, only more carefully executed, but the number of failures from peritonitis, pleuritis and even gangrene are too numerous to speak in favor of it. Indeed, the first and most celebrated gastric fistule, that of H. Martin, was performed by the bursting of a powder flask, very successfully indeed, but I hardly think it would encourage any one to quote his case as favorable to an operation by which gastrotomy was to be performed with blasting powder.

I am fully convinced, that the establishment of gastric fistula performed under Lister's antiseptic, after previously well

secured adhesions between outside and inside, is almost devoid of any danger and can safely be adopted in all cases where obstructions exist, which cannot be overcome by dilatation, and will eventually kill by inanition.

The fistula may be and in fact ought to be in most cases only a temporary arrangement where it is made for non-malignant stricture. This is more and particularly appliable to stricture acquired by children through the influence of caustic substances. The tissues in that age are naturally very tender, the canal in proportion smaller than in grown persons, and the struggles of the ignorant child against the sounds are serious objections to the long continued efforts of dilatation. Anæsthetics administered in such cases make matters worse, because there is no guidance by the feeling of the patient to show you whether you are right or wrong with the instrument. Whoever has made post-mortem examinations of such strictures will concur with me, that the destruction of tissue is generally very irregular, thin layers of membrane alternating with thick cicatrical tissue. I know myself of two cases in which the sound (a common india rubber catheter) perforated the stricture and went into the mediastinum, causing death in a short time. Both cases occurred to experienced and careful physicians, and it seems that in neither of them any extra violence was used, nor was there a mandrin in the catheter.

I believe that usually nine-tenths at least of all children who acquire strictures by swallowing condensed lye, which is in this country the favorite liquid, will die sooner or later from slow starvation if relief is not obtained by dilatation or gastrotomy. Dilatation is a proceeding, which like the analogue in the urethra, has to be kept on for a long time, and if neglected will leave the case as bad as ever. The history of such poor children is generally as follows: They manage sometimes, and even during a long period to swallow fluids tolerably well; there are frequent moments however where nothing can be passed even for a continuance of days. They can never swallow solids, and liquids require generally such an effort, that the child gets tired of eating before the appetite is satisfied. So they gradually emaciate, and if dilatation is practiced it either kills or fails, or is not continued long enough

and they die either from slow starvation, tuberculosis or any other of those diseases liable to cut off shattered constitutions.

Now, gastrotomy affords us, when properly performed, a safe remedy by which life can be sustained until the patients have attained an age more suitable for the protracted use of bougies. They may then possibly be entirely cured and the artificial opening closed, or it may remain permanent and permit life with tolorable comfort.

No fears need to be entertained that the subsequent closure of the fistula is difficult—indeed, from my experience it seems to be more probable that it will grow up against your wish.

I do not mention the advantages which may be derived from the operation in malignant disease of stomach or œsophagus and in compression of the later organ by irremovable tumors of the neck because they are only transitory. But prolongation of life, even for a few months is something for which it is worth to risk an operation neither painful or dangerous.

I only know two methods, by which the operation is performed in compliance with the rules set down on a previous page—those of Langenbeck and Howse. Langenbeck transfixes the stomach after having it exposed with a large steel needle put through the stomach and abdominal walls, and a row of close sutures uniting the peritoneum of the edges of the wound with the viscus. All sutures perforate the cavity of the stomach, and while the needle is only left 24 hours, the sutures are removed after 4 days, and the stomach then opened by knife or trocar.

This proceeding is certainly very ingenious and had a very good success in the case where it had been adopted. There are, however, still some objections, particularly the perforation of the entire thickness of the stomach into the cavity by all the stitches and the needles—favorable to oozing of digestive fluid through them and unfavorable to *prima intentio.*

This deficiency was overcome by Howse, who improved the method in such a way, that it may be called perfect and unsurpassable.

I operated on a case nearly nine months ago according to his

plan and only publish it now because I wanted to wait a reasonable time to see if the success was permanent. I think now the operation has fulfilled all expectations, and I shall give the history of the case from August 30, 1879, until May 10, 1880.

Jessie Lumly, aged 6 years, 7 months, very healthy and bright child, swallowed condensed lye in August, 1878. After the usual acute attack of gastritis, she recovered with a stricture. She was then living 30 miles from here and treated by a country physician during the first days of her illness. Since then she has been totally unable to swallow solids, even the softest rice or vermicelli, and often could not swallow water or milk for a whole day or more. One time she was without food or drink during 3 days. At such times she would swallow and spit out fabulous quantities of water or milk in order to allay the cravings of hunger and thirst, and would twist and bend her neck in all kinds of positions, trying to force something through the stricture. During cold weather the difficulty was greatest, while in mid-summer she managed sometimes to drink a quart of fluid, always though with great effort. She became thinner every day, and was finally nothing but skin and bones.

In August, 1879, her parents brought her to San Antonio for treatment. In examining, I discovered a stricture half way down the sternum, near the lower end of the manubrium, which would not admit even the finest catgut bougie. Repeated examinations—one under chloroform, gave the same result and were rendered very difficult by the struggles of the child, which had been very much spoilt during its long illness.

In recollection of similar cases I resolved upon gastrotomy, which was performed August 30, 1879, under assistance of Drs. Amos Graves and my two sons, Drs. John and Adolf Herff.

Chloroform was given, and under Lister's spray an incision was made 3 inches long and running parallel with the cartilages of the left ribs, ¾ inches from their edges, beginning a little below and to the left of the ensiform cartilage. Bleeding vessels were secured with catgut, and after opening the cavity the left lobe of the liver, partially covering the stomach, was

first seen. It was easily seized with the fingers and pulled into the wound. A circle of sutures was then made, which attached the stomach to the peritoneum ½ inch distant from the edges of the wound. These catgut sutures were tied, each one separately, over small pieces of india rubber bougie, and great care was taken not to penetrate the whole thickness of the stomach, but only ½ or ¾ of it. Another row of 15 sutures (catgut) fixed the stomach to the margin of the external wound, and at last two carbolized silk sutures transversed the abdominal walls and stomach about ¼ inch from the wound. These sutures like the first one, did not penetrate the cavity. The silk sutures were then tied, which nearly closed the wound, except a small part of its middle, which was marked by a silver suture as the future place for the incision into the stomach. Antiseptic dressing, under spray, finished this first part of the proceeding, which lasted one hour, and is really the only difficult and tedious part of it. The child had borne chloroform very well, although it tried to vomit several times, of course without bringing up anything, while the contractions of the stomach and the pressure of the abdominal muscles upon its contents were very perceptible. No fever, no pain followed the operation, except retention of urine, probably caused by an opiate that was given, and this was relieved by the catheter.

In five days the dressing was removed, the wound had closed by first intention, all the catgut ligatures came out spontaneously by the absorption of their intra-vulneral part. The silk tissues were cut and I proceeded to open the stomach.

Unfortunately, the child began then to exhibit again one of her fits of bad temper, and fought and struggled so much, that chloroform was given again.

This time it produced after a few inhalations total and apparently fatal syncope with complete cessation of breathing and nearly complete suspension of the heart's action. She was quickly turned on her head and by pressing and relaxing the thorax alternately, artificial respiration produced, and so after a painful suspense, at last the suspended animation was restored.

I found to my mortification that the newly united parts had

not been able to resist the rough handling of the thorax, and discovered in the inner corner a rent 1½ inch long, by which the liver and stomach could be seen. I united that again by two silk sutures, including the exposed part of the stomach in the way previously described. New antiseptic dressing and repetition of the treatment and feeding of the first days, consisting of beef tea and pancreatic emulsion, alternating with eggs and starch water by enema. Small pieces of ice and small quantities of milk were permitted to be taken by the mouth, but hardly ever reached the stomach, and were regurgitated after awhile. Notwithstanding this, the child was kept alive in that way during the whole time that elapsed before the fistula was established.

This time suppuration of the wound took place, and the dressing had to be changed daily, always, of course, under spray.

On the fifth day again the stitches were removed, but at that period the child was seized with regular intermittent fever of a tertian type, to which she had been subject long before the operation. Temperature during exacerbation of 104,° very perceptible tumor of the spleen and total intermission after the paroxysm.

Quinine per rectum relieved her, and on September 19, almost three weeks after the first operation, the cavity of the stomach was opened—this time of course without anæstethics. An incision of ½ inch was made in the middle of the cicatrix, followed by a gush of clear gastric juice, with a small admixture of bile. A small artery of the wall of the stomach was tied with catgut, a piece of pressed sponge inserted and covered with antiseptic dressing. The sponge was removed twice a day, and on the third day a fistula of ½ inch by ¼ inch diameter was established, when feeding was commenced at once.

I injected at first milk and other liquid food with a syringe, but that caused pain—curiously enough, not on the stomach but in the neck. I then substituted a funnel through which the liquids were poured as long as the funnel would not fill. This took, sometimes, over a minute. The liquid in the funnel

would rise and fall until it finally disappeared altogether. Soon afterwards solid food, principally chopped meat, was introduced—at first piece by piece by means of a delicate forcep —afterwards a certain quantity of the meat was placed near the orifice, and pushed or rather stuffed in with a soft india-rubber catheter of Maisonneuve (No. 13). This succeeded admirably well and was absolutely painless. Notwithstanding the great quantity of food the child took in this way (¾ pound meat, 2 quarts milk or soup, 6 eggs and some bread) it complained always of being hungry and continued as before to swallow water and food and reject it after a little while. This caused a great waste of saliva and of couse interfered with digestion. I omit to mention the different contrivances adopted to avoid this, and only state what I do now after eight months experience, and what has produced very fine results. Before doing this, I will state, that the child had since had two attacks of chills and fever, was vaccinated, and suffered in November and December from a very severe attack of catarrhal pneumonia, which diseases interfered very much with her general health and prevented her for a long time from gaining flesh.

The vaccination, which was rendered necessary by the city regulations, run its course without much disturbance; the chills were more disagreeable and had to be treated by quinine inserted through the fistula. The pneumonia was of a very bad type and in its course calomel,opiates and digitalis were inserted, and towards the close of disease when a very severe diarrhœa set in, sugar of lead and opium was given through her second mouth as she calls it. She is now in fine health, of ordinary weighth, can walk a mile, and has very little trouble from her fistula. Sometimee it get contracted and requires reinsertion of pressed sponge for dilatation. She has no eczema around the fistula; her bowels are regular, more inclined to be costive. When she stands upright nothing runs out of the fistula, which then is closed by a fold in the line of incision, acting like a valve. But when she lays down every thing pours out, if the orifice is not closed by a tampoon. To prevent this I employed at first a large tracheotomy tube stopped up with a cork. Now

she wears an india rubber tampoon, similar to the mouth piece of a baby bottle and having a wooden shield at its base, to which an india rubber string is attached, which fastens it around the body. The wound is also covered with a little absorbing cotton.

She is fed regularly with meat (mostly raw beef), chicken, bread, chocolate, eggs, soup, farina, Horlick's infant food, milk, etc., etc. All that food she first chews, swallows it and spits it up afterwards, when it is inserted eitner by the funnel or with a bougie. The same thing is done with the water she drinks, as the sensation of thirst is only allayed when the water goes previously down her throat.

When her stomach is entirely empty in the morning, a clear liquid runs out on removing the tampoon—sometimes mixed with bile. During her spells of tertian, this admixture was more perceptible and larger in quantity.

The feeding is since many months done by her mother and sometimes by herself, and she is only visited by me when I show her to a physician.

It is a curious fact, that she has hardly ever got anything down into her stomach by the natural way, since she is fed through the fistula. I believe she dislikes to undergo the struggles and contortions, which are required to accomplish that, and not being obliged by threatening starvation, she is satisfied and makes no effort.

She takes as much food as any child of her age and would probably take more if I would permit it, as the sensation of being satisfied is not existing like in normal feeding, and she only says when she has taken a large meal: "My stomach is full but I can eat more."

I intend to try bougies again as soon as the child is old and reasonable enough to offer no resistance, and will make an effort to reach the stricture through the fistula. But should every thing fail, I am convinced that the child can live and be healthy in her present condition.

This is all that is remarkable in her case. I shall of course follow it up, and if anything should happen, which is interesting, I shall communicate it to the profession.

Obstetrical Notes.

By J. M. WATKINS, M. D., New Orleans, La.

DELIVERY OF AN ANENCEPHALIC FŒTUS.

On Friday, October 10th, at 10 o'clock, P. M., was called to see Mrs. W., aged about 35 years, in labor with her fifth child. The mid-wife in attendance told me that the waters had escaped about 6 o'clock, P. M., when she was sent for. On examination found it to be a case of face presentation. The labor progressed rapidly and favorably until the face reached the vulva, when in spite of strong contractions, no advance in the delivery was perceptible. This continued until 8 o'clock, P. M., when without any apparent necessity, as the uterus was already contracting forcibly, she administered a dose of ergot; no benefit resulted, the head still remaining fixed. As before stated, I was called at 10 o'clock; learning this history, and without any examination further than to satisfy myself that the face was presenting, I immediately left to procure forceps. On my return, and preparatory to their application, I introduced my hand to make a thorough examination, when to my surprise I discovered a total absence of occiput, and nothing could be felt posteriorly but a soft, pulpy mass. I immediately asked the mid-wife if she had perforated the head? To which she answered, No. The case presented to this association previously by Dr. W. H. Watkins, immediately suggested itself to me, and I felt satisfied that it was an anencephalic fœtus, and that the extraordinary development of the trunk, usual in these cases, was the whole cause of the difficulty in the delivery. I grasped the head and made firm traction, but with no effect. I attempted to introduce my hand, but the pelvis was so blocked up that it was impossible for me to introduce it far enough to grasp any portion of the body on which I could make traction. After pulling on the head for fully half an hour without making the least impression, I then sent for Dr. Lewis to assist me, but he was too unwell to come. So I administered chloroform, and after getting her thoroughly under its influence, tried again what I could accomplish by pulling on the head. This time I pulled to more

advantage, and was soon able to introduce my finger into the axillæ, ordering the mid-wife to pull vigorously on the head, while I tugged by means of my hold in the axillæ, and our united efforts being aided by the firm uterine contractions, we soon delivered a monster, weighing 12 lbs; a perfect specimen of an anencephalic fœtus.

FUNIS PRESENTATION COMPLICATED BY BOTH HANDS IN THE VAGINA—CHILD SAFELY DELIVERED.

On Wednesday, October 8th, 1879, at about 11 o'clock, A. M., I was called to see Mrs. W., aged 40 years, in labor with her tenth child. An experienced mid-wife was in attendance on the case who informed me on my arrival, that the waters, of which there had been an unusual quantity, had only escaped half an hour previously. On examination made previous to the rupture of the membranes, she thought she had felt the head presenting, but on examining immediatrly after she found a hand in the vagina. Alarmed at this she requested that a physician be called. Immediately on introducing my finger, about two inches from the vulva, I discovered not simply a fold of the funis, but a mass of pulsating cord. Introducing my hand a little further, I found both hands of the child extending well into the vagina. Here indeed, was rather an unfortunate complication of affairs. Placing the woman in the "knee-elbow" position, I succeeded without much difficulty in forcing the arms back into the cavity of the uterus. I then attempted to replace the cord. This was accomplished with considerable difficulty, owing to the great portion prolapsed, and the increasing contraction of the uterus. However, after some time and perseverance, I succeeded. I then introduced my hand still farther into the uterus; found the child transverse with the head high up, and resting opposite the left acetabulum, the fore-head presenting, pressing my finger between the head and the uterus, and manipulating the womb externally with my left hand on the abdomen, I soon had the satisfaction of realizing not only that I was thus changing the absolute transverse position of the child, but that the vertex was gradually sinking lower towards the outlet. Satisfied

with the result I continued, and in less than 15 minutes, I was able to grasp the head, which I did, and drew it into a natural position. I then waited patiently, with my hand still holding the head in position, until I had reason to believe the uterus had contracted sufficiently to keep it in place, when I permitted the woman to resume her position in bed. This was accomplished without the least trouble. Strong contractions came on, and in less than 40 minutes after my arrival, she was safely delivered of a male child. A well-formed pelvis, a medium sized baby, and my prompt attendance so soon after the rupture of the membranes, all favored a successful termination of what, under other circumstances, might have proven a desperate case.

Reduction of a Dislocation of the Femur Seven Weeks Standing, by Manipulation.

By DR. J. B. ARMSTRONG, New Orleans, La.

Peter A. Stramp, a seaman, belonging to the Bark "Echo," Capt. Johnson, while doing some work upon the main-top-sail-yard on the morning of March 26th, missed his footing and fell. A long spar resting one end upon the "poop deck," the other upon the "forward house," breaking the fall as a spring board, threw him up to be afterwards precipitated on deck, dislocating the right femur upwards and backwards upon the dorsum of the illium. The accident occurring at eight o'clock, the patient took no breakfast. He apparently suffered but little, and to use the expression of the captain, "with the exception of breakfast, March 26, has not missed a meal since the accident occurred." The following morning the vessel put into Maderia for medical aid, where the dislocation was reduced, permitting the man to sit up in bed. The following day luxation re-occurred and remained so until I saw him on May 9th, when I removed my patient to a room in the village where greater attention could be bestowed. Placing him upon the floor and producing thoroughly anæsthesia with chloroform; taking hold of the leg just above the foot with the right

hand and the lower third of the thigh with the left hand, rolling the injured leg over the sound one, then flexing the thigh over the abdomen as far as the umbilicus, rotating it outward at the same time producing extension, the head of the bone slipped into the acetabulum with considerable sound, and both legs measured the same. A Physics splint was then applied and the patient put into bed, when a luxation again occurred, which was again reduced, only to luxate again during the night. On the afternoon of the 10th, my friend Dr. W. H. Riley visited the case with me; we again reduced the luxation with the assistance of the anæsthesia and placed the limbs upon a double incline plane, upon which we left them without the smallest accident, and only very small degree of pain in removing him to the ship, which sailed on the morning of May 20th, the patient doing remarkably well.

The remarkable features of this case was its frequent luxations in so short a space of time and the perfectness of control over this obstacle by the use of the double incline plane.

On the Use of the Bromide of Ethyl.

By I. L. CRAWCOUR, M. D.

On the 14th May, I was consulted by Mr. M., a native of Malta, a stout plethoric man, aged about 54. He told me he was suffering from fistula in ano, but was so sensitive to pain that he could not submit to an examination without an anæsthetic. His physician, Dr. Del Orto, informed me that on a former occasion he had given him chloroform, but the symptoms produced were so alarming, that he would hesitate to administer it again. I therefore resolved to try the bromide of ethyl. Accordingly, assisted by Dr. Del Orto, I administered it in the way recommended by Dr. Levis, viz: on a napkin, covered by another large one. About three drachms were poured on the napkin, and both held firmly over the mouth and nose. After some slight struggling, and some muscular excitement, he fell into a calm, natural sleep, and I was able to make a full examination.

The time occupied in producing full anæsthesia, did not occupy two minutes, and I do not think more than two drachms of the liquid, were used much having been lost by evaporation. He awoke perfectly collected; there was no nausea, and he was able to go out and attend to his business.

I determined to operate on Tuesday, the 18th, and on the occasion of the operation I used Dr. Rohe's ether inhaler, poured three drachms of the bromide into the bag, applied it closely to the face, and after a very few deep respirations, full and complete anæsthesia was obtained. The time occupied in this was a minute and a half, as observed by Dr. Del Orto; the colour of the face was unchanged; there was no struggling and but very slight muscular excitement. The pulse before the administration was 80. The operation was performed in the usual way without any difficulty and without haste. When he awoke the pulse was 78. There was no nausea and none of the disagreeable after effects which so frequently follow chloroform or ether.

When on the former occasion chloroform was used, a very large quantity had to be employed, and in addition to the very dangerous symptoms, observed by Dr. Del Orto, he did not entirely recover for a week.

Of course, it is impossible from a few cases to predicate that any anæsthetic shall be absolutely and entirely safe, but from this limited experience, I believe we have in the bromide of ethyl, an agent which in many instances is safer than chloroform, requires but a small quantity, and is free from the persistent, sickening and disagreeable odor of ether. Another advantage is its non-inflammability, so that it can be used at nights, and when the actual cautery may be required. The preparation used was that made by Messrs. Wyeth, of Philadelphia, and is colorless and of a very agreeable odor. Its present high price is for the moment an obstacle to its large employment, but if it should come into more general use, I presume this will become lower. For short operations and especially for office use, I think it will be very valuable. To produce its full and rapid effect, as little air as possible should

be mixed with it. For this reason, I regard Dr. Rohe's apparatus as particularly useful.

I intend to give it a very extended trial and will report cases as they occur.

Two Cases of Poisoning with Aconite.

By M. F. LEARY, M. D., Gaylord, Kan.

On September 8th, I visited Miss C., aged 19, who had a quarter of an hour previously taken a teaspoonful of the fluid extract of aconite root at one dose. I found her retching and vomiting incessantly, no radial pulse, it being barely discernable at the elbow, the skin was cold and completely blanched, and when I pinched folds of it in my fingers she experienced no sensation. Her lips were puffed up and everted, she complained of a burning pain (which she likened to a fire), extending from her mouth through the œsophagus to the stomach; her mind was perfectly clear throughout. After using an emetic of ipecac and warm water, I gave tr. nucis vomic. ℥ss and whiskey ℥ss every 10 minutes, and had her extremities and body briskly rubbed with dry mustard. After the fourth dose of the nucis vomica, I discontinued it and employed the whiskey alone giving ℥ss every 15 minutes with small pieces of ice in the mouth to allay the thirst and burning, and using pressure over the stomach when necessary to prevent vomiting. Under this treatment the symptoms rapidly abated and two hours after first seeing her the pulse became perceptable at the wrist and the nausea greatly relieved. It was fully ten hours after taking the poison before the reactionary fever set in. The lady was confined to her bed for a week afterwards from apparently a general exhaustion, but eventually fully recovered without any apparent bad effects.

The aconite had been prescribed by an acquaintance, a "sort of a doctor," who had visited Miss C., and her sister Mrs. A., that day, and found them both suffering with light intermittent fevers and had given a prescription for half an ounce of the fluid extract of aconite "to break their fever." His directions were oral and probably misunderstood.

On my arrival at the house I found Mrs. A. greatly alarmed for her sister's safety. She informed me what had been taken and stated that she (Mrs. A.) had also taken a teaspoonful of the poison at the same time her sister had, but being quite sick to the stomach had vomited almost immediately after, while her sister had not vomited till at least five minutes had elapsed. Mrs. A. assisted in rubbing her sister and as she exhibited no bad effects from the aconite I did not deem it necessary to prescribe for her. When Miss C.'s symptoms had in a measure abated, in perhaps two hours, Mrs. A. was taken with nausea, burning in the throat, and in fact about the same symptoms her sister had exhibited only in a greatly modified degree; I employed only ice in small pieces in her mouth to relieve her great thirst and pressure on the stomach as in her sister's case. The next morning she was able to sit up though feeling quite debilitated from her attack.

The aconite taken is of the usual strength. I have used the same article in my practice, its maximum dose being 4 drops.

It has been my misfortune to have witnessed cases of poisoning from arsenic, strychnia and corrosive sublimate, but I have never before met one so appalling as that of Miss C., or one I had less reason to expect good results from, but I must confess I was astonished to witness how rapidly the dangerous symptoms subsided and patient was out of danger.

That the treatment materially affected the result, I am very much in doubt! The quantity of liquid ejected from the stomach equaled if it did not exceed the amount drank, and the amount thrown up at different intervals was proportioned to the amount imbibed and there could have been but little if any absorbtion of liquids taken place from the time that the poisoning occurred till after the major symptoms subsided. In the case of Mrs. A., the anxiety and excitement produced by her sister's illness seemed to have acted as a powerful stimulant to the circulation, and I firmly believe that had the excitement of the case kept up for two hours longer she would have escaped without any symptoms of poisoning, the aconite having had time to expend its force.

Current Medical Literature.

ON ANTISEPSIS IN EYE OPERATIONS,

By Dr. C. FROHLICH, in Berlin.

In contrast to the general surgeons, who had good reasons for taking advantage of the antiseptic treatment introduced by Lister, the ophthalmologists have only recently thought of adopting an antiseptic treatment. These were accustomed to see the wounds heal by first intention and it was an exception to see a cataract extraction, an iridectomy, or a tenotomy, followed by symptoms of infection, while in some hospitals, erysipelas, septicæmia and pyæmia rendered any operation, no matter how trifling it was, fatal.

Besides, the universally adopted antiseptic agent, carbolic acid, was not fit for being applied to an organ as delicate as the eye.

It is, however, not to be denied, that in exceptional cases infection takes place; this is at any rate the manner in which we have to explain a panophthalma making its appearance a few hours after a perfectly successful cataract operation, or the phlegmon of the orbita following a tenotomy, or an iridectomy resulting in purulent kerato-iritis. The appearance soon after the operation is characteristic for the infection; we may conclude from this, that the danger of infection is very great during the operation, and that the infecting matter is quasi inoculated.

It is hence of paramount importance prophylactically to disinfect in the most scrupulous manner all objects used during the operation. Dr. F. considers this prophylactic much more important than a strictly antiseptic after-treatment, as it is hardly possible to check an infection which has already taken place, except perhaps, by using very concentrated solutions which, in themselves, would be dangerous to the eye.

The now generally adopted antiseptic treatment (carbolic acid, spray, etc.) not being practical in eye surgery, Dr. F. advocates a modification, and recommends then to commence disinfecting all the instruments, which he does, by dipping every instrument in absolute alcohol, rinsing them afterwards in distilled water and wiping them dry with clean, soft linen. All other objects coming in contact with the eye previous to, during and after the operation, are treated with boracic acid (lint, cotton, gauze, solution).

The operator and his assistants having washed their hands in a solution of boracic acid, the eyelids and the supra and infra orbital regions are cleaned and washed with the solution of borac. acid. During the operation only cot-

ton treated with boracic acid is used for absorbing humor aqueus or blood; when the operation is performed the closed eyelids are again moistened and covered with boracic lint, on the top of which the boracic cotton is applied, and finally a flannel roller.

The preparations of boracic acid are without odor and do not irritate, neither conjunctiva nor cornea.

Dr. F. admits that very good results have been obtained without any antiseptics (Horner had in over 800 cataract extractions, hardly a loss of 2 per cent. before antisepsis was introduced), but thinks that the above mentioned treatment offers to the operator a guarantee, which he cannot obtain otherwise. The result in cataract operations obtained by A. v. Gräfe, is stated as 5 to 6 per cent. loss without the use of antiseptics, and as 1½ per cent. loss when antisepsis was used. This statistic is indisputable, as usually the different individuality of the operators, the different locality, etc., has to be taken into consideration, while in this case the same operator, working under identical conditions and using the same operative method, has improved his results so considerably merely by adopting an antiseptic treatment. (Ought the greater skill and experience acquired by the operator in the course of time not to be considered as an item?—Rep.) (*Klinische Monatsblätter f. Augenheilkunde.)*

In the same number of "*Klin. Monatsbl. f. Augenhheilk.*" Dr. Ernest Fuchs, in Vienna, reports 2 cases, which may be considered as the result of infection and possess a peculiar interest in connection with the above article.

In the first case an ordinary linear cataract-extraction was performed without difficulty on a 30-year old woman, suffering from diabetes and being in poor general health. The cataract was soft and was extracted piece-meal, through a 6 millim. long incisor made with a lance-shaped knife, 2 millim. from the limbus; the evacuation was complete and was performed without injury to the lips of the wound or to iris.

The following day, and yet on the morning of the third day, the eye had a natural appearance; in the evening of the third day the eye turned red, cornea became dim and presented along its periphery a gray opacity, which was not any more pronounced near the wound than anywhere else. The following day chemosis; the corneal dimness had increased so much that the pupil was barely visible. Towards the periphery the opacity had a yellowish hue.

During the consecutive day cornea became perfectly opaque and of uniform gray color, bulbus commenced to protrude and its mobility was impeded. On the seventh day after the operation cornea could be removed in toto from the eye, as if it had been dissected with a scalpel along the corneo-scleral border. During the following days pieces of iris were detached and

parts of vitreous body escaped and the eye dwindled gradually down. The pain which had never been considerable, now ceased entirely, the patient, however, collapsed and died in three weeks from tuberculosis of the lungs.

Dr. F. is of the opinion that infection took place originally and that the micrococci, which are always present in the atmosphere, had in this case an extraordinary chance for their development in the debilitated condition of the patient.

The literature contains many instances of unsuccessful operations for diabetic cataract, but the eye was always lost through corneal suppuration or through irido-cyclitis, but nowhere is mentioned that sequestration of cornea occurred.

In the second case an otherwise healthy man, 49 years of age was suffering from glaucoma simplex on both eyes. Iridectomy was performed on the left eye February 9th, last year, and the wound healed in a few days. Nine days later iridectomy upwards was also performed on the right eye. The operation, performed by Prof. v. Arlt, succeeded without the slightest accident occurring, no contusion of the lips of the wound or of iris took place, and the bleeding was not considerable.

About twelve hours after the operation there appeared swelling of the eyelids, and conjunctiva and uniform dimness of cornea, accompanied by severe pain. In two days the panophthalmitis was manifest. About a week later when the enormous swelling had subsided somehow, it could be seen that bulbus was lying entirely free and bathed in pus inside Tenon's capsule and was kept in its position only by nerv. opticus. The somewhat shrunken bulbus could be twisted around its axis at pleasure as far as nerv. opticus would allow it. In this case sequestration of bulbus had occurred inside Tenon's capsule. The mechanical injury produced by the operation was in this case so slight that it was natural to think of an infection of the wound, all the more, as the inflammatory symptoms appeared so very soon and violently. As conjunctiva and the lachrymal sack were in a normal condition, the instruments or the atmosphere had to be supposed to carry the infection.—*Klin. Monatsbl. f. Augenheilk.*

RECENT PROGRESS IN SYPHILOLOGY.

By EDWARD WIGGLESWORTH, M. D.

Nature of Syphilis; its Inoculation upon Beasts.—At a recent meeting of German naturalists and physicians at Cassel, Professor Klebs alluded* to a course of experiments tending to prove that the essential poison of syphilis was a fungus. Until the world is sufficiently syphilized to appreciate its danger, and to employ, in self-defense, criminals condemned to death for purposes of inoculation with syphilis, truth can hardly be

*Allg. med. Central-Zeitung, November 16, 1878.

attained. In the mean time Klebs has inoculated during the last three years many beasts, but arrived at definite results only in the case of apes, upon which the pathological manifestations are the same as upon man. Hunterian indurations or primary ulcerations were excised while recent. The microscope always showed, in the tissue fluids of these, more or fewer round cells and numerous slowly moving rods from two to five mm. in length. These last were planted upon gelatinous tissues, and developed in a few days into a fungous ring surrounding the piece of tissue employed, and formed of little rods at first briskly moving, and then drawing themselves together into little balls, oval in form and composed of a network of the interwoven rods.

July 8, 1875, some of this fungus was subcutaneously injected into a healthy ape. By the middle of August circumscribed swellings upon the gums and tongue appeared and soon turned to foul sores, which as to their yellowish floors, sharply cut borders, and indurated circumfusa coincided with syphilitic ulcers. Precisely these appearances were fortuitously present at the same time in a case of hereditary syphilis in Professor Klebs' private practice. The syphilitic nature of the sores upon the ape was recognized by the celebrated syphilologist, Pick, of Prague, September 1st the ape was poisoned, and showed at the autopsy and upon microscopical examination various abnormalities according with the syphilomata found in man.

December 29, 1877, a healthy ape was inoculated with portions of a freshly excised Hunterian induration. No chancre. Lymphadenitis in the neighborhood. In exactly six weeks fever, and in a few days papules on the face, head and neck. The ape died May 17th, having grown gradually more and more feeble. The autopsy showed various syphilitic alterations of the skull and internal organs. The blood of this latter ape developed under cultivation, in a few days, fungi resembling closely those employed in the inoculation of the former one.

Klebs calls these little rods or filaments helico-monads, as belonging to monads in family and on account of the spiral formation of the rods in mass, but will gladly accept any more rational appellation on the part of botanists. In February, 1879, Professor Klebs, in a leading article of sixty pages,* treats more fully of this subject, and a confirmatory paper by Professor Pick is appended. He concludes that at times, under certain circumstances, syphilitic indurations are not infectious, that is, have ceased to be so, that the different stages of growth of the fungus possess different grades of inoculability, that excised portions of syphilitic indurations become more infectious by being preserved for a few days in glass rods before being inoculated; finally, that (1) by inoculation of excised

*Arch. f. experiment. Path. und Pharm., February, 1879.

pieces of syphilitic induration taken from human beings the disease can be communicated to beasts, in whom, however, the course of the disease is, as to its manifestations, a varying one; (2) that in human syphilitic new formations there are found certain vegetable organisms of a low grade, which, when cultivated outside the body, produce well-characterized, peculiar forms,—helico-monads; (3) that inoculation of these last upon suitable beasts causes manfestations coinciding in nature with those of genuine syphilis upon human beings and with those of inoculation syphilis upon beasts. Professor Pick adds that the initial sclerosis was excised in cases (1) where it was the only symptom; (2) where the neighboring lymphatics were affected; (3) where general symptoms were present. In the first series some patients showed subsequently no general symptoms, or only after a very protracted period of incubation (agrees with observations of Professor Auspitz); in the second series general syphilis always followed; and in the third series the disease progressed normally, new induration usually, though not always, appearing at the site of excision, which rarely happened in cases belonging to the first series, and never unless general manifestations followed. Absence of tissue sclerosis at the point of excision does not necessarily exclude the possibility of subsequent general symptoms. The fungus, the animals, and the pathological specimens from them are well shown in plates, colored and plain.

Chancre of Tonsils; Rare Syphilodermata as Sequelæ.—A young man aged 32 years, and always healthy, presented himself* at Hardy's clinic, Hôpital de la Charité, for treatment. Six weeks previously he had an intensely sore throat, with dysphagia and hawking, soon followed by a cough and swelling of the right jaw, both obstinate. At present, laryngo-tracheitis and alteration of voice. Body covered with a brownish-red eruption, partly macular, partly vesicular, and partly papular, the papules having a red areola, and resembling the eruption of variola. No itching or smarting. Small lenticular patches, flattened or crowned by little pustules, either whole or crusted, were scattered among acuminated vesicles distended by serum. On the side of the neck was a clearly defined characteristic ganglionic enlargement, while the inguinal glands were unaffected. On the prepuce were plaques muqueuses, but no initial lesion. Nothing upon the lips; but in the throat, upon the right tonsil, was a small cleft, ulcerated, with a grayish base and an areola of a lively red color,—an infecting chancre. Chancres of the throat are often due to catheterization of the Eustachian tube with unclean instruments. Forty patients were thus inoculated with syphilis by a single physician in Paris some ten years ago. Or, the mouth being brought in contact by any means with an ulceration or mucous

*Gazette des Hôpitaux, September 10, 1878, No. 105.

patch, the virus may be carried to the tonsils by the saliva. In cauterizing the throat of a syphilitic patient, recently, a drop of saliva coughed into the eye of the physicion, who foolishly stood in front of his patient, gave rise to chancre of the inner canthus, followed by constitutional symptoms.

Abortive Treatment of Syphilis.—Weisflog* considers the lymphatic system the path through the body of the syphilitic poison when once inoculated; that a certain time is required before the local infection can become general; that during this period, by the use of proper means and methods, the disease may be aborted. There is this difficulty in the way: that it is proved therapeutically that the internal administration of those remedies which act best against the general disease when developed are powerless to prevent such development. Broca incised the affected lymphatic glands, and by the injection of tincture of iodine induced inflammation, having observed that syphilis rarely followed suppuration of the glands of the groin, and thinking to imitate nature. Weisflog, while admitting the falsity of the method, still holds on to the idea, and considers that Broca waited too long, and that the spread of the poison should be prevented before it attains the various ramifications of the lymph system. He calls to mind his own statement,† that "watery solution of acid nitrate of mercury subcutaneously injected occasions, without exception, abscesses upon parts already inflamed, but upon healthy parts none at all." For five years, and in thirty-two cases of undoubted indurated or mixed chancres, the writer has injected subcutaneously this solution between the genitals and the inguinal glands, in addition to the local treatment. In fourteen of these cases abscesses occurred on both sides, in six cases upon one side only. Where the lymphatics were not inflamed there was no formation of an abscess, and *never general constitutional infection*, provided only that the injection was repeated every ten to twelve days until the local source of the infection was not only healed over but had also lost every sign of induration. Where, on account of preëxisting inflammation, abscess formation occurred, there followed also *no syphilis*. Of the writer's thirty-two cases he has ascertained the subsequent history of twenty-eight persons, all of whom, as well as their descendants, remained free from syphilis.

Mercury develops its highest powers as an antisyphilitic agent when brought into direct contact with the chancre poison in the tissues affected, that is, when the channels of this poison into the system are impregnated with mercury. The possibility of infection may even at times be removed by the local destruction of the chancre by means of mercurial preparations applied before the poison has spread beyond the induration into the

*Virchow's Archiv, lxix. p. 143, 1877.

†Virchow's Archiv, lxvi. p. 311.

neighboring lymph channels. The writer demands that this method shall receive a trial.

When to begin Constitutional Treatment for Syphilis.—Sigmund asserts* that the most suitable time to begin constitutional treatment is in the second period of the development of syphilis; but even then only when various systems or organs appear affected by the virus, or one of these very severely so, or the general nutrition and energy of the body have been seriously impaired. Otherwise, local remedies will suffice. Initial manifestations belonging to the first period are, according to Sigmund's experience, uninfluenced in their course by general antisyphilitic treatment, or this course is actually prolonged by the debility produced by medicines. Under local applications alone there occurred, in forty per cent. of cases thus treated, only very light secondary symptoms, observable solely by the patient; and in not a small number the secondary manifestations vanished speedily and entirely with merely local treatment. Moreover, experience shows that general medication begun at a late date is followed by more speedy and complete results than when inaugurated early in the course of the disease. As in all his writings and lectures, the author lays great stress upon the value of hygiene and diet, and the simultaneous attention to any other complicating constitutional malady.

Syphilis among Merchant Seamen.—Dr. R. A. Caldwell, surgeon Cunard royal mail steamship Russia, writes† that no greater boon could be conferred upon the sea-going population than the adoption of the "Contagious Diseases Acts" in Liverpool and other great sea-ports. Scarcely one sailor in ten escapes venereal disease, which is a prominent cause of "invaliding." The surgeons of the American navy support the sanitary value of the regulation of prostitution. They report that in certain sea-ports where stringent laws are enforced, a two-month's stay was not followed by a single case of syphilis among the ship's company, whilst in ports where prostitution was unregulated the records were very different. Venereal dispensaries should be attached to sailor's homes, thus preventing seamen from falling victims to quacks. Compulsory medical examination of all men before signing articles is, however, the true principle. The modern sailor is not the man one reads about, and, when he knows that physical soundness is an imperative condition to his obtaining a berth, he will not so recklessly expose himself. Compel also the prostitute to sell her wares unadulterated, and the worst features of these diseases are practically extinguished. The voluntary plan is of little value. The "acts" have been proved of great benefit to garrison towns, and will be of even more to the frequenters of sea-ports, for the evils of prostitution are more severe in the case of sailors, often

*Wien. med. Wochenschr., No. 10, 1879.

†Medical Times and Gazette, May 25, 1878.

at sea for months without medical aid. As Mr Acton says,* "The nation's weakness can be assisted only by the nation's strength."

Circumscribed Sarcocele (*Gumma Testis*).—The sarcocele of the French school may be a thickening of the tunica albuginea, with the formation of new fibrous tissue between the seminiferous tubules, which gradually causes the absorption of these last and takes their place. This is the sclerous sarcocele of Fournier, the interstitial orchitis of Cornil and Ranvier, the diffuse orchitis of Lancereaux, or the syphilitic albuginitis of Ricord. It is the most common manifestation of syphilis in the testicle, and causes atrophy of this organ unless arrested by treatment. The other form is the gumma proper, a plastic product accompanied by thickening of the tunica albuginea and hyperplasia of the fibrous septa. The gumma may be circumscribed and of the size of a nut, or may infiltrate the testicular tissue spreading along the septa. M. Reynier reports† two cases of the first variety, and refers to two others, one by West,‡ the other by Huber.§ He makes a distinction between superficial gummata, suppurating speedily, causing ulceration, and yielding to treatment, so that the intact seminiferous substance may regain its functions, and deep gummata, generally parenchymatous, rarely suppurating, of slow progress, possibly causing fungous masses when opening exteriorly, and yielding to treatment after the testicle has been reduced to a shell and its functions destroyed. Fungoid formation does not necessarily follow suppuration.

Syphilis of the Testicles in Young Children.—Henoch reports‖ seven cases of disease of the testicles accompanying infantile syphilis, these being enlarged, hard and unelastic, and frequently nodulated. The children were from three months to two and and one half years of age, and the diseased condition usually improved under the use of mercury. In the case of one child, aged two and one half years, the general appearances had vanished after thirty inunctions of one gram each of mercurial ointment. The swelling of the testicles did not disappear, and the child dying three months later of measles with diarrhœa, the autopsy showed both testicles still very large and indurated. Microscopical examination proved extensive interstitial hypertrophy of the connective tissue, most strongly developed in the corpus Highmori. No gummata were found. This case, like the third case of Désprès, goes to prove that when fibroid new formation is already present as the result of inflammation, no diminution of the size of the testicle need be

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*Prostitution, second edition, pages 8 and 9.

†Archives générales de Médecine, April, 1879, page 385.

‡Dublin Quarterly J. of Med. Sci., November, 1859.

§Deutsches Archiv. f. klin. Med., 1869.

‖Deutsche Ztch. für prakt. Med., 11, 1877. Schmidt's Jahrb., Bd. 178, No. 4.

expected to result from the use of mercury. The process in question represents an interstital orchitis and epididymitis, and may be classified with the similar condition, occurring in cases of hereditary syphilis, in the liver and in the cortical substance of the kidneys.

Syphilis Contracted in Old Age.—Contrary to the general belief, Sigmund regards* syphilis acquired late in life as of special mildness. He has made one hundred and eighteen observations of such cases in men of over fifty-five, and in women of over forty-five years of age. The period of incubation is longer than in young people, three to six weeks being required for the sclerosis of the initial lesion and the corresponding adenitis. The characteristic manifestations of ulterior stages were also delayed as to their appearance to a period much later than is common in the syphilis of young life. Early secondary eruptions were usually slight and superficial, tubercular or deep exudative formations being rare. They appeared also without fever, and though often with vertigo, insomnia, and cephalalgia, never with an epileptic attack. Generally, he thinks, the hair and the nails did not seem influenced by the disease. There was no caries of the nasal bones, of the jaw, or of the laryngeal cartilages. People already enfeebled sometimes showed profound disturbances of nutrition, and three cases were of grave prognosis. In forty per cent. after adenitis and roseola no further symptom was developed. It was only where severe symptoms appeared that anti-syphilitic medication, properly so-called, was used. Otherwise Sigmund made hygiene the basis of his treatment of these cases. In about half the cases local applications alone were employed, in the other half mercurials internally and externally. Twenty-one patients showed general amelioration without perfect cure.†

Influence of Syphilis upon the Course of Wounds.—Dudterhoff summarizes‡ the results of the experience derived from the recent wars in Europe as to the action of the syphilitic poison upon wounds received by its possessor, thus: (1.) Superficial contusions or continuous irritation of the wounds can, during the contagious period of syphilis, cause the appearance of syphilitic efflorescence at these points of irritation without, however, influencing the healing of the wound. (2.) Wounds received close to or touching the primary induration may yet heal *per primam*. (3.) Latency of syphilis if favored by the increased activity of tissue metamorphosis during the healing of severe wounds, but as cicatrization becomes complete the syphilis may appear at the point of injury or elsewhere. (4.) Old siphilis, if latent, does not interfere with union by first intention after surgical operations; if present, the poison acts

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*Wien. med. Wochenschr., Nos. 21, 22, 27, 31, 1878. Schmidt's Jahrb., 1879, page 139.

†Arch. gén. de Méd., April, 1879.

‡Wien. med. Wochenschrift, December 21, 1878.

unfavorably. (5.) Bone syphilis predisposes to fractures and militates against consolidation. (6.) Inveterate syphilis, with diseased bone and general exhaustion, may cause wounds to assume a definite form of gangrene yielding to specific treatment. (7.) Constitutional syphilis has no connection with pyæmia, nor is it proved to predispose to bleeding of wounds.—*Boston Med. and Sur. Jour., Oct.* 23, 1879.

CHINESE SURGERY—HOW EUNUCHS ARE MADE.

By WALTER R. LAMBUTH, M. D., Shanghai, China.

Perhaps the readers of the journal may be interested in some facts relating to Chinese eunuchs, the operation of castration and the general status of eunuchs in China. I am indebted to the 14th *Medical Report of the Chinese Imperial Maritime Customs* for the following paragraphs:

"Surgical* operations among the Chinese are, for the most part, comprised under the headings of *acupuncture*, the application of the *moxa*, and the *opening of abscesses.* The first two are practiced for all manner of diseases, the sole necessary indication being the presence of local pain or swelling. The last is adopted only when the fluid contents of a tumor are visibly approaching the surface: and, no doubt, superficial aneurisms occasionally happened to be so treated.

"But, as a rule, Chinese practitioners are both timid and tardy in their use of the knife, and for this reason foreign surgeons find that a large part of their work among the natives consists in the opening of huge collections of pus, which have burrowed between the muscular planes, and the treatment of sinuses, whose orifices have often, for years, been carefully closed with resinous plasters.

"The one exception to the general rule is found in the boldness with which the Chinese castrate men and animals. By some extraordinary chance they have even discovered the dependence of conception upon the presence of the ovaries, and acting upon this knowledge, they not only castrate boars and cocks, but spay sows with remarkable skill and success.

"The operation of castration is mentioned in native histories as early as 1100 B. C., when it was by edict constituted one of the recognized modes of punishment for certain grave offences. Its object, when performed in pursuance of a sentence, appears always to have been purely punitive, not preventive on any theory, such as has been sometimes broached, and which has much to recommend it, that criminals of the worst sort should be prevented from founding or increasing criminal families."

According to Mr. Stent, the last recorded occasion on which its performance was inflicted as a penalty was in 1856, when

*A portion of the following appeared in the *Lancet* of 28th July, 1877.

a number of rebels were captured in the metropolitan province, having with them several boys under 15 years old. The adults were all beheaded, and the children all castrated. But an edict, which appeared in the *Pekin Gazette*, of the 28th of November, 1877, proves that in special cases the same punishment is still inflicted. The following is a translation of the edict referred to:

"Yu Luh, Governor of Huhwei, memorialises, reporting that when, in 1872, certain disturbances had broken out on the borders of that province and of Honan, after the apprehension of the leader of the rising, Li Liu by name, which took place in Honan, the government forces in Huhwei further effected the capture of this malefactor's son, Li Mas-Tze, at that time six years of age. The child was then handed over by the Governor then in office to the district magistrate of Hwaining, to be kept imprisoned until he should reach the proper age to be dealt with according to law, and the magistrate of said district has now reported that the prisoner has reached the age of eleven, and acknowledges that he is the son of the insurgent leader, Li Liu, but that, owing to his tender years at the time, he knew nothing of his father's treasonable designs." The law runs as follows:

"The children and grandchildren of rebels, if not themselves privy to the treasonable designs of their parents, shall be delivered into the hands of the Imperial Household to be castrated, and shall be forwarded to Turkestan and given over as slaves to the soldiery. If beneath the age of ten, they shall be confined in prison until they have reached the age of eleven, whereupon the sentence of the law shall be carried into effect."

"As the prisoner in question has now reached the prescribed age, execution of the sentence of the law must be proceeded with; and submission to this effect having been made by the Provincial Judge, on application of the prefect of Hwaiking-fu, the governor has approved the same, and has communicated with the board in due form. He requests that instructions be issued accordingly. *Rescript*:—Let the Board of Punishments take note.

"In China, however, as elsewhere, eunuchs are in general made in order to qualify them to act as palace servants, and occasionally as palace executioners. They may be kept only by certain members of the Imperial family, and in the palace of the eight hereditary princes, whose ancestors assisted in establishing the present dynasty. The Emperor has 3,000 in his service, exclusive of 18 castrated Lamas, who act as domestic chaplains; each prince of the blood and Imperial princess is obliged to maintain 30, and so on through the different grades, the number diminishing as the distance from the head of the reigning house increases. Every fifth year each prince supplies eight young eunuchs for the palace, but as this contribution does not by any means meet the demand, the general public is called on to send in adults or adolescents as candidates for

the painfully acquired honor of palace employment. As a matter of fact there is no dearth of persons willing to submit to castration. Boys are compelled by their parents to offer themselves, while as to adults, men who are at once poor and lazy, are tempted by the certainty of an assured income, with little or nothing to do for it, and men with a peculiar form of ambition are seduced by the mystery and importance of the duties supposed to be conferred on eunuchs. Thus it happens that at the present moment some of the eunuchs in Pekin have tribes and families. But when a eunich dies he is buried, not with his family, whether he has one or not, but in a place specially set apart, whither, every spring and autumn, a body of eunuchs repair to offer those sacrifices which, in the ordinary course of life, are offered by children to the manes of their fathers.

"The operation is performed by an establishment maintained for the purpose, immediately outside one of the palace gates. The operators are known as knifers, and they contrive to keep the trade in their own families. For each castration, and the subsequent care of the case, they receive the equivalent of £1 16s. sterling.

"When about to be operated on, the patient is placed in a semi-supine position on a broad bench. One man squatting behind him grasps his waist, and one man is told off to each of his legs. Bandages are fastened tightly around the hypogastric and the inguinal regions, the penis and scrotum are three times bathed in a hot decoction of pepper pods, and the patient, if an adult, is solemnly asked whether he repents or will ever repent his decision. If he appears doubtful, he is unbound and dimissed, but if his courage has held out, as it usually does, all the parts are swiftly swept away by one stroke of a sickle-shaped knife; a pewter plug is inserted into the urethra, and the wound is covered with paper soaked in cold water, and is firmly bandaged. The patient, supported by two men, is then walked about the room for two or three hours, after which he is permitted to lie down. For three days he gets nothing to drink, nor is the plug removed from the urethra. At the end of this period the dressings are changed, and the accumulated urine allowed to escape. The parts generally heal in about one hundred days, when the patient is inspected by an old experienced eunuch, in order to make sure that the mutilation is complete. About two per cent. of all cases prove fatal, some by hemorrhage, some by extravasation, and some doubtless by irritative fever. Mr. Stent says nothing about obliteration or contraction of the canal of the urethra, although one would expect that the process of cicatrization would frequently produce this accident. For a long time after the operation there is incontinence of urine. Hence a common Chinese saying, 'He stinks like a eunuch.'"

The organs removed are embalmed and sealed up in pint

vessels. Whenever a eunuch is nominated for appointment to any post, he must produce his vessel, and have the contents inspected by the proper authority. Should the parts be lost, he has to borrow or hire the vessel belonging to another. When he dies his organs are buried with him. It would seem that even after the very radical operation just described, a growth is occasionally reproduced round the urethra sufficient to excite the suspicion of a jealous tyrant, and perhaps the interest and curiosity of the members of his harem. At all events, history records that in the middle of the last century, a report having been made to the Emperor that some of the palace eunuchs had become dangerous, the entire staff were "swept clean" a second time.

When young, according to Mr. Stent, eunuchs are rather like handsome girls, but are easily distinguished by the total absence of hair or down on their cheeks, and by their falsetto voice (vox fracta). They age rapidly. They have little or no muscular strength, but a lavish deposit of subcutaneous fat makes them stout. As this fat is absorbed soon after middle age is reached, an elderly eunuch is repulsive in appearance, resembling a wrinkled, withered hag. In walking eunuchs lean forward, keeping the legs close together, with the toes pointed outwards. When riding they do not grip the saddle, but trust to the stirrups alone. By these marks the Chinese recognize the approach of a eunuch while he is still at a great distance. Eunuchs are hysterical, easily moved to violent wrath, and as easily appeased; readily aroused or depressed, with no tendency to melancholy or suicide. They are generally timid and harmless, affectionate to women and children, and passionately attached to pets, especially to dogs. They are honest and charitable, and are noted as not being hagglers. They are all gamblers. They are moved to revenge chiefly by allusions to their deficiency.

I might add more to the subject, but this article has already assumed such proportions as to warn me against trespassing further on your good nature.—*Nashville Jour. of Med. and Surg.* March.

OBLITERATION OF PORT-WINE MARK.

We have received from Balmanno Squire, M. B., London, a pamphlet describing his method of removing port-wine mark without scar, as recently improved by him. The original plan, announced some years ago, was to freeze the surface with ether spray, and make a series of parallel scratches through the small blood vessels with a cataract knife or similar instrument, about the sixteenth of an inch apart, and then make another series of incisions at right angles with the first set. Pressure with the finger was then applied to the scarified surface before it had thawed, and kept up ten minutes or longer. By this means hemorrhage was entirely prevented, no bleeding whatever

occurring. One or two repetitions of the operation resulted generally in a perfect cure. Finding however that the perpendicular cuts fail to reach some vessels running vertically, he has lately modified the process by cutting under as it were, or making the incisions obliquely, holding the knife at an angle of 45°. He advises the pressure in this case to be directed somewhat laterally towards the direction from which the incisions are made. The purpose of this is to close the incisions more completely, thus effectually preventing hemorrhage. The only object in avoiding so carefully the discharge of blood appears to be to render the operation neat and seemingly trivial to the patient. When the plan as described is carefully followed, two sittings are sufficient for the perfect removal of the mark, no scar remaining. A large surface may be treated piecemeal, by which the sittings would of necessity be multiplied. Dr. Squire's description of the treatment and its results is given with so much precision, and is so well reasoned withal, that we cannot doubt the efficiency of the method.—*Pacif. Med. and Surg. Jour.*, March.

TOOTH-CARIES OF PREGNANCY—ITS CAUSE AND TREATMENT.

By EDWARD C. KIRK, D.D.S., Philadelphia.

It is a well-known fact that during pregnancy women are often subject to more or less annoyance and discomfort from their teeth. This disturbance may vary in degree, from a slight uneasiness—a mere consciousness on the part of the individual of the presence of teeth in her mouth—to the severest form of odontalgia, involving several teeth. The frequent occurrence of rapid and extensive destruction of tooth-structure during pregnancy is so well recognized that it would be useless to multiply examples: one case will serve to illustrate. Mrs. J. presented herself for examination of her teeth. She gave the following history. Up to the time of her marriage the teeth had been of good quality, rarely requiring the services of a dentist. During the three years following marriage she gave birth to two children; she also suffered much from toothache, and had two of her teeth extracted. After the birth of her second child she placed herself under the care of a dentist in a neighboring city, who put her mouth in order; he being a thorough and conscientious operator, the work was well done.

Again she became pregnant, suffering as before with her teeth; some of the fillings dropped out, and a number of new cavities appeared. It was after the birth of this her third child that she came under my charge. On examination, I found the teeth very sensitive, and so soft that they could be cut away almost like chalk. The decayed portions were of that peculiar cartilaginous character which indicates a loss of the mineral portions of the tooth. I filled, in all, seventeen cavities, some large, others small, and extracted the root of one

tooth too far gone to be of service in sustaining an artificial crown.

This case is a typical one, and illustrates well a class of cases that call for a large share of the dentist's attention. In those cases where women have borne children rapidly, it is the common story that up to the time of marriage the teeth were of good quality and gave but little trouble, but since have rapidly failed.

As to the cause of this degeneration of tooth-structure during pregnancy, there is little reason to doubt the accepted explanation than an excessive demand is made upon the system of the mother for the lime-salts necessary to the formation of the osseous structures of the fœtus, and the teeth of the mother suffer, along with her osseous system, in meeting this demand when the supply of lime-salts is not sufficiently kept up in the mother's food.

We believe that much can be done to avert this wholesale destruction of the teeth, the loss of which entails so much disfigurement and physical suffering. If the cause be as stated, then to supply food rich in lime combinations is the rational indication. But most of the food brought to our tables is not rich in bone-forming material, and it may be that even a liberal supply of lime-containing food would not meet the urgent demands made during pregnancy upon a system already poor in lime-salts; certainly the judicious use of some of the soluble preparations of lime, such as the lactophosphate or hypophosphite, would be of benefit in such a case, not only in maintaining the lime standard of the mother, but also in insuring to the fœtus a well-developed osseous and dental organization. We have every reason to believe that rickets is due to lime-starvation on the part of the mother and child; and evidence is not wanting to show that certain malformations of the jaws, and consequent irregularities of the teeth, are in a measure due to the lack of sufficient bone-forming material during fœtal development.

A fact in this connection which I have had occasion to observe more than once is that in a large number of pregnant women, the morbid craving, so-called, for unusual articles of food—which is so often present and may occasion great annoyance to both patient and physician—is for articles of a mineral character, as chalk, slate-pencils, lime, plaster, whiting, etc.

Two cases in particular have come under my notice. In the first case the woman would mix a saucerful of whiting and water, which she kept near her during the day, and would eat large quantities of it with evident relish. In the other case the lady stated that, during her pregnancies, her desire for lime was so great that she would almost have to run past a mortar bed in the street, lest the desire to stop and eat portions of it should overcome her. When at home, she would pick particles of plaster and whitewash from the wall and eat them greedily.

It seems reasonable to believe that this craving is nothing more than nature's method of expressing the need for lime-salts when, from pregnancy or other causes, the supply is not equal to the demand and the system is poor in lime as a consequence. I say from other causes; for what else is it that will make a rapidly-growing, overworked school-girl chew her slate-pencils and lead-pencils with such apparent relish?

If all this be true, then the treatment before indicated of supplying to the system all the lime it needs, either by properly selected food, or, if occasion demands it, by the administration of a sufficient quantity of some soluble preparation of lime, ought to do much towards averting the destruction of the teeth by caries during pregnancy, and relive the distressing cravings for unusual kinds of food incident to that period. As having bearing upon the subject and showing that an increased amount of lime is demanded by the system during pregnancy, I may cite the fondness which birds and fowls generally have for lime, oyster-shells, plaster, etc., during the egg-laying period. Another point which I have noted is that this fondness for lime is displayed on the part of the female more than on that of the male: hens will quarrel for the possession of an empty egg-shell, and the cock will look on without interest while they devour it greedily.

The effect of an insufficient supply of lime is seen sometimes in the case of caged birds, as canaries. If they are not supplied with cuttle-fish bone during the breeding season, the eggs will be laid without shells, or with shells so thin that they will not withstand the slightest touch. This same result takes place with hens that are cooped for a length of time and are not supplied with a proper quantity of lime-containing food. Is not the desire for lime shown by these animals analogous to the cravings so often exhibited by pregnant women for like substances? It is true the craving does not in every instance take the form of a desire for lime; but nevertheless it is probably only an expression of the same need lacking proper direction.

The system makes demands for what it needs in a way there is no mistaking. At times we crave acids, and we indulge freely in pickles, acid fruits, etc. At other times sugar or salt is needed, and we eat accordingly.

This is further illustrated by the long pilgrimages made by the buffaloes and antelopes of our Western territory to the salt-licks, in order to satisfy their instinctive demands for salt.

The rapid destruction of teeth during pregnancy, and the therapeutic measures suggested by the so-called morbid cravings, are of equal importance to physician and dentist.

To secure for the overtaxed child-bearing woman immunity from much pain, nervous distress, imperfect mastication, and impaired digestion, by the preservation of her teeth, cannot be considered as a trivial matter.

As the sphere of the dentist to-day is limited in a great measure to the repair of injuries already sustained by the teeth, we must look to the members of the medical profession to aid us in answering the question. How much in the way of preventing the decay and loss of the teeth from pregnancy can be accomplished by supplying to the system all the lime it needs during the gestative period?—*Philadelphia Med. Times*, March 27.

CODE OF ETHICS OF THE MASSACHUSETTS MEDICAL SOCIETY.

(Adopted by the Councilors, February 4, 1880.)

Object of a code of ethics. The Massachusetts Medical Society is designed to secure to the public a body of well educated and otherwise trusty physicians. Its code of ethics is intended to furnish certain principles and rules of action for their guidance and convenience.

I. The relation of the physician to medical science. A physician should lend his influence to encourage sound medical education, and to uphold in the community correct views of the powers and the limitations of medical science and art.

II. The relation of the physician to medical business. The professional success of a practitioner depends upon qualities connected with his moral character, his scientific attainments, and also his industry and business talent. But the relation of practitioners of medicine to families and households is not like that of tradesmen to their customers. The kind of competition which might be considered honorable in business, cannot exist between physicians without diminishing their usefulness and lowering the standard of the medical profession. (See IV, Sec. 1; V, Sec. 1.)

III. The relation of the physician to his patients. The first duty of the practicising physician is to his patient, who has a right to expect that his disease shall be thoroughly investigated and skillfully treated, with charitable consideration for his mental peculiarities or infirmities, and in a relation strictly confidential.

1. The physician should not make unnecessary visits. He should neither permit needless apprehension nor fail to give seasonable notice of danger.

IV. The relation of the physician to other practitioners and to their patients. In his relations with another practitioner and his patients, a physician should be governed by strict rules of honor and courtesy. His conduct should be such as, if universally imitated, would insure the mutual confidence of all medical practitioners.

The foregoing rule should be a sufficient guide of action. Some of the following contingencies will illustrate its application:

1. A physician should take no step with a view directly or

indirectly to divert to himself the patients or practice of another physician.

2. If formally requested to assume charge of a patient or family usually attended by another physician, he should consent to do so only after notifying the latter, unless the case be one of pressing necessity.

3. If a physician is called to a patient during the temporary absence or illness of the usual physician, or in the case of accident or other emergency, he should direct that the former be sent for as soon as he is able to take charge of the case, and should then relinquish it to him. It is generally agreed that among several physicians thus called, he who first arrives shall act, unless the family designate another.

4. A communication from the temporary to the usual physician, in the absence of the latter, should be written and sealed, and not simply verbal.

V. The relation of the physician to quackery. In every community there are minds naturally inclined to quackery, which has flourished in every age. It grows by being noticed, and thrives best under opposition. It is commonly unwise to employ argument against it. But a physician should lend his influence to establish a distinct line between the regular practice of medicine and the practice of quackery, and should avoid any act which might tend to weaken such a distinction either in the professional or in the public mind.

1. Thus, he should not consult with an irregular practitioner *(see By-Laws)*, nor countenance the use of secret remedies, nor be interested in medical trade-mark preparations; nor give certificates recommending mineral waters, patents, or medical preparations, or the like; nor give a commission to an apothecary, nor receive one from him; nor advertise himself or his practice in public print; nor publicly advertise advice or medicines to the poor, etc.

VI. Consultations should be encouraged in cases of unusual responsibility or doubt.

A consultation is called for the benefit of the patient, and to give him the advantage of collective skill. Should there be a difference of opinion, discussion should be temperate and always confidential.

A consulting physician should be careful to say or do nothing to impair the confidence of the patient or his family in the attending physician.

1. See, for guidance of a consultant, IV, Secs. 1, 2, 3, 4.

2. At a consultation punctuality is important; and non-arrival within fifteen minutes after the appointed time should be interpreted as non-attendance.

3. For the advantage of the patient and for economy of time, it is well in a consultation to observe a certain order of business. The following has been found convenient:

The attending physician, having stated in general terms the nature of the case, may then call, in turn, upon each consultant, if there be more than one, to examine the patient—the usual order being that of seniority. No consultant should make an examination or inquiry out of turn. On retiring, the attending physician may invite, in the usual order, the opinion of each consultant, who should not be interrupted while giving it; after which he may add his own. In conclusion, a course of action may be agreed on, or the attending physician may be left to act at his own discretion.

VII. Fees. A fee-table has a local application, and is designed to indicate a fair or average amount due for services. But if the patient fully understands it beforehand, a physician is at liberty to place any value he sees fit upon his services. It is then at the patient's option to decline them or to pay the price. A physician should be considerate of the poor.

1. A patient in moderate circumstances should not be called upon to pay a fee unusually large for the service rendered, without a previous explicit understanding. A physician, if able, should offer to pay the medical attendant of himself or of his family. Unless by special agreement, a physician attending or acting for another should receive the fees. Among obstetricians a rule obtains that the interval between the birth of the child and the placenta halves the service and the fee. A fee should be charged for a medical certificate or paper of value to the applicant, connected with, for example, absence or exemption, life insurance, pension papers, etc., except the usual certificates of vaccination and death.

VIII. Seniority. Seniority applies rather to duration of practice at the place in question than to age.—*Chicago Med. Gazette*, March 20.

INTRA-UTERINE MEDICATION BY IODISED PHENOL.[1]

By ROBERT BATTEY, M. D. Fellow of the American Gynæcological Society, etc.

Eight years ago, I was impressed with the opinion that the results obtained from intra-uterine medication by argentic nitrate and other escharotic remedies, as was then the custom in America, were very unsatisfactory. In my own practice, it was a common observation, that scanty menstruation of a permanent and intractable character followed upon the treatment, due apparently to a cicatricial condition of the endometrium left behind. In not a few cases, stenosis of the os had to be remedied, and in some instances recurred time and again. In a few cases, entire occlusion of the os occurred, and retained menses had to be evacuated.

In casting about for eligible substitutes, the iodine tincture

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[1] Read in the Section of the Obstetric Medicine at the Annual Meeting of the British Medical Association in Cork, August, 1879.

and carbolic acid presented themselves, and were successively tried, both separately and in combination, but the results thus obtained were meagre and unsatisfactory. Theoretically, iodine appeared to offer decided advantages, not only as a local stimulant to the uterus, but, in consequence of its ready absorption, as a local and general alterative also, but the officinal tincture proved too feeble in power to secure satisfactory results, and the stronger preparation of Dr. Churchill of Dublin was to me then unknown.

The thought of employing carbolic acid as a solvent for iodine suggested itself, and experiment developed a knowledge of the remarkable solubility of the latter in the liquified acid. At first, one drachm, then two, three, and four drachms of iodine, was found to be soluble in an ounce of the acid. The last, and strongest, solution proved to be decidedly escharotic in its action upon the tissues, and especially upon heterologous growths of low vitality, and has been much used by the writer for attacking uterine cancer, and more particularly to supplement the curette. The standard solution employed in intra-uterine medication consists of one part by weight of iodine dissolved in four parts of liquefied carbolic acid, and to this solution I have given the name iodised phenol.

Iodised phenol is believed to be simply a concentrated solution of iodine in carbolic acid, and not in a proper sense a chemical compound. It is black in colour, syrupy in consistency, and possesses in marked degree the pungent odour of iodine, which is rapidly given off when it is heated.

Since its introduction into my practice, the iodised phenol for intra-uterine medication has been employed by me to the almost entire exclusion of other remedies. In February, 1877, it was brought to the notice of the profession in America through the columns of the *American Practitioner*, and is to-day very much employed, but more especially in the southern states. The recital of cases to illustrate its uses would be inconsistent with the brevity which should characterise the present writing, and hence it is proposed to present in general terms only the method of its application and the results obtained from its use.

At first, it was employed in a state of more or less dilution with glycerine; but, more recently, it has been used only in its full strength, being the energy of the application, regulated by the quantity employed and the extent to which it is carried into the uterine cavity.

The instrument employed in making the application may be one of the many forms of applicators, so-called, or any uterine probe or sound which will easily enter the canal. It is my habit, and I specially prefer, to use a rather slender and elastic hard India-rubber probe, made slightly tapering, and with a blunt, not bulbous, point. The elasticity of this probe allows it to yield rapidly to pressure, to change its course, to follow easily the canal of the cervix, and to enter the uterine cavity

proper, and this in spite even of a moderate flexion or version of the uterus. From the cotton-factory is obtained cotton-wool in the form of an untwisted rope or roll, the fibres of the cotton being perfectly straight, and lying parallel to each other. It is technically known to the cotton-spinners as "the lap," and can be purchased of the best quality at our factories for eightpence to tenpence sterling per pound. It is admirably suited for general gynæcological uses.

Mode of Application.—Having selected six or eight of the elastic probes, I break off from the cotton "lap" four or five inches, and with my fingers separate or split it into several fasciculi of such size as, when wound upon the probes, will enlarge them to the thickness desired. The end of a probe is now moistened slightly, and the fasciculus of cotton wound spirally upon it. The cotton-armed probe is now dipped into the iodised phenol, any redundancy is allowed to drip away, and the probe is passed into the uterus with a slow spiral movement as it advances. At first, the probe is introduced but a short distance, and immediately withdrawn, and the case rests here to test the tolerance of the uterus for the remedy. At subsequent stages, the probe may be carried to the fundus, and followed immediately by a second, and even by a third or fourth, if well borne. The remainder of the wrapped probes are employed for wiping off the cervix or vaginal wall any of the phenol that may have touched these tissues. The energy of the application is regulated by the size of the wrapping, the depth to which the probe is passed, and the number of medicated probes used. When a very decided impression is to be made, a backward turn is given to the probe in its withdrawal, so as to leave the saturated cotton in the uterus, there to remain twenty-four hours, or even until it is spontaneously expelled. The application is renewed every four to fourteen days, according to the energy of the treatment.

I have abandoned the use of sponge-tents in connection with the treatment set forth. When dilatation is required, the cotton-wrapped probe is employed, and the cotton left as a soft tent in the canal. The dilating power of this is notably less than of sponge, but nearly equal to sea-tangle, and, it is believed, entirely safe. The results are the following:

1. A perfect removal of all cervical mucus, which is promptly coagulated, and comes away closely adhering to the cotton. The probes subsequently passed bring the remedy directly in contact with the diseased membrane.

2. Always comparative, and usually entire, freedom from pain. This is a marked feature of the method, and in striking contrast with former experience. Carbolic acid is a local anæsthetic, and so numbs sensibility as to make the energetic application of iodine for the most part entirely devoid of pain.

3. The iodine is so rapidly absorbed by the uterus, that the patient remarks its metallic taste in the mouth and throat, ordinarily in five or ten minutes after the application.

4. Softening and more or less dilatation of the cervix and os.
5. There is temporary arrest of leucorrhœa, followed by
6. Watery discharge, sometimes bloody.
7. There is exfoliation of the superficial layer of the mucous membrane, which comes away in shreds, sometimes entire, and resembles glove-kid.
8. Abrasions of the os promptly heal.
9. Indurations of the uterus disappear.
10. Leucorrhœa is permanently arrested.
11. Villosities of the endometrium are removed without resort to the curette.
12. Subinvolution of the uterus disappears.
13. The menses become regular and healthy; menorrhagia and scanty menstruation, as well as dysmenorrhœa, are remedied.
14. The appetite and digestion improve, and this, in many instances, without the use of medicines.
15. So thoroughly is the system impregnated with iodine, that alteratives by the stomach are not used.
16. The form of the cervix and os is often completely changed; a large puffy cervix with patulous slit-like os, becomes even virginal in type after long use of the remedy.
17. Stenosis has not followed the treatment in any case noted.
18. Barrenness of nine to fourteen years' duration has been removed in several instances.

REMARKS.—Rapid, and at the same time satisfactory, cure of chronic uterine ailments, such as are contemplated in this paper, is not attainable by any method of treatment known to me. It is not proposed that rapid cures can be made by the means herein set forth; on the contrary, the long standing and obstinate cases, such as usually fall into my hands, require many months for satisfactory cure.—*Brit. Med. Jour.*, March 27.

PETROLEUM IN PHTHISIS.*

By C. G. POLK, M. D., Philadelphia, Pa.

Crude petroleum deservedly ranks next to cod-liver oil in the therapeutics of tubercular and scrofulous diseases of the respiratory apparatus.

As yet the knowledge of its properties is largely empirical—the results of clinical observations rather than of theoretical conclusions, or of hypothetical deductions. It is unquestionably an alterative; an agent which modifies molecular morphology, which impresses those functions by which the non-living is endowed with vital attributes, and by which the integrity of the nutritive fluid is maintained. Improved digestion is one of the earliest indications of its effects. It gives strength to the stomach. Food which had previously nauseated that viscus, is

*Extract from a forthcoming work on "Tuberculosis, Scrofulosis and Allied Disease.

kindly received and promptly digested. The appetite becomes more active; inconveniences, such as gastralgia, acid eructations after eating, and heartburn, are either dissipated or ameliorated. If the patient has been losing weight and strength, the loss is often arrested, and occasionally it is both astonishing and gratifying to witness the transition from decided emaciation to rapid recuperation—the patient losing the haggard, wan and death-like expression, exchanging it for the hue and glow of health.

Another result the author has witnessed in a large per cent. of the cases in which he had employed crude petroleum, is the prompt manner in which it lessens hectic phenomena. Patients in whom the "sunken eye is too bright, the hollow cheek too flushed, the breath too thick and heavy in its course" to leave a doubt of the impregnation of the blood with the debris of caseous tubercles, and tyromatous degeneration of inflammatory exudations, often rapidly improve. The afternoon flush no longer beautifies the cheek with the mockery of death; the elevated temperature and rapid pulse become normal; the skin no longer depletes the blood of its serum by night sweats. These are counteracted, and comfort and improved health supplant these omens of the inevitable hour.

In the chapter on hectic fever, the doctrine is advocated, that this complication of suppurative diseases is but the consequence of the impregnation of the blood with the debris of broken down lung tisssue. For this, petroleum is a desirable agent; it acts as an antiseptic, neutralizing or destroying the blood poison, and thus counteracting its deleterious impress upon the organism; it increases the functions of both assimilation and elimination—thus aiding in conveying to the tissues their pabulum for repair, and the excretion of the worn out elements from the system. It is impossible to find another agent so well adapted to meet the indications at every stage of this malady. Were the author compelled to select and rely upon a single therapeutical agent, he would give crude petroleum the decided preference.

Cod liver oil is highly injurious in the febrile and inflammatory stages, extending inflammation and hastening the morbific results, favoring hæmorrhage, and only potent for mischief. Under similar circumstances, the hypophosphites are nearly as objectionable, especially the combinations of those containing iron; while petroleum is a decided antiphlogistic, quieting the excited heart, correcting the deranged condition of the capillaries, thus lessening vascular congestion and removing the fuel of inflammation. This property of petroleum is very decidedly manifest in the benefit it confers upon the catarrhal elements of the various forms of phthisis. Frequently after trying the various anodynes to relieve a harrassing cough, without any apparent advantage, the physician will give up in despair, and conclude that it is useless to attempt its control. But if he will

even then place the patient upon petroleum, he will often find that the cough is rapidly diminished, the expectoration becomes less abundant and more natural; the nights, heretofore spent in agony, bring quiet and refreshing sleep; the pain and soreness in the respiratory apparatus disappear; the lung and bronchial catarrhal symptoms are brought in abeyance, and the general amelioration is well marked. These conclusions are well sustained in the history of cases 240 to 300, and will receive a most cordial approval from all physicians familiar with the medical properties of petroleum in chronic catarrhal diseases of the respiratory passages, and in the inflammatory complications of tubercular disease.

But while the value of petroleum in all these conditions is incontestible—while it fills a place in the therapeutics of the catarrhal conditions of tuberculosis, unfilled by any other remedy, it has no claims to the rank of a specific. Unaided, it will seldom be equal to the contest with the tubercular cachexia—unable to cope with the primordial lesions in the nutritive functions; and yet it will often supply the missing link in the chain by which human life is moored to the terrestial shores.

Valuable as it is, as an alterative, tonic, antiseptic and expectorant, its disagreeable odor and taste are formidable obstacles to its administration. The majority of patients will accept cod-liver oil as less nauseous, and many will refuse to take the petroleum unless so combined as to mask its presence. This difficulty led the author to employ various devices to obviate it. He formed an emulsion with acacia, the yolk of eggs and sherry wine, flavored with the oil of bitter almonds, and succeeded so that the petroleum was scarcely discernible by taste or smell. It is so proportioned that each tablespoonful will contain one drachm of the petroleum. This amount should be taken four times a day, after meals and at bed time. The difficulty, however, in obtaining this emulsion properly prepared induced him to prescribe it with Lueflund's extract of malt, flavored with oil of anise or oil of sassafras. The majority of patients take petroleum in this manner without much remonstrance. In cases in which cod liver oil is not contra-indicated, the emulsion of the oil with wheat phosphates, known as "phospho-nutritive and cod liver oil," combined with the petroleum, forms a very available combination. It may be given with malt liquors to many persons without being tasted; others with acute olfactory organs detect its presence and refuse to swallow it. By tact and perseverance, however, the caprices of most patients can be overcome.—*Virginia Medical Monthly*, March.

SALICYLIC ACID IN THE TREATMENT OF DIABETES.

Dr. Schætzke publishes in the Berliner klin. Wochenschr. for June 2d, 1879, the history of three cases of diabetes successfully treated by salicylic acid. The first case was that of a lady,

aged 50, who had for eighteen months been under treatment for chronic gastric catarrh. Her father, sister and husband had died of tuberculosis. When she was seen by the author, he at once suspected diabetes from the excessive thirst, polyuria, caries of the teeth, etc. The urine was examined and found to contain sugar; the specific gravity was 1038. The patient was treated with salicylic acid, 3 grammes (45½ grains) being ordered to be taken three times daily for three days. On the first day, however, she felt giddy, and had nausea. On the second day she vomited once, her hearing was affected, and her gait became unsteady. The dose was therefore reduced from 9 grammes daily to 3 grammes. Owing to her intolerance of salicylic acid, Herr Schætke sent her to Carlsbad. On her arrival there the urine was found to be perfectly free from sugar, and remained thus both during her cure and afterwards. The second case was that of a man, aged 58, who probably had been suffering from diabetes for the last two years. The urine contained a considerable percentage of sugar. As the patient could not be prevailed upon to go to Carlsbad, he drank the waters at home, but without much benefit. Herr Schætke again resolved to try the salicylic acid, beginning, as in the first case, with 3 grammes three times a day. This patient also evinced great intolerance of the drug. It was, however, continued for two weeks, in doses of 3 grammes daily during the first week and 2 grammes the second week, when the sugar disappeared from the urine and did not reappear. The other case was that of a girl, aged 26, who had been suffering from colic for years. She was treated in the same way as the other patients, but was obliged to discontinue the treatment after the first four days, owing to her intolerance of the drug. A week later another attempt was made with a dose of 2 grammes daily; this was continued for a fortnight, when the urine remained free from sugar. It is curious that in every one of these cases the patients should have been so intolerant of the salicylic acid. Could this phenomenon be in any way connected with their disease? And if so, in what way? Three cases can scarcely be regarded as sufficient to establish the reputation of salicylic acid as a cure for diabetes, but the subject is worthy of being investigated.—*Therapeutic Gaz.*, Feb.

DIPLOMA-SELLING COLLEGES.

The Massachusetts State Medical Society is moving in the matter of ridding the Bay State of quacks. It recently presented to a legislative committee the names of a number of institutions which, though legally chartered, make a business of selling diplomas. The list of these is as follows: American University of Medicine and Surgery, of Philadelphia; Philadelphia University of Medicine and Surgery; Physio-Eclectic Medical College, of Cincinnati, O.; Physio-Medical College, of

Cincinnati, O.; American Eclectic Medical College, of Cincinnati, O.; St. Louis Homœopathic Medical College; St. Louis Eclectic Medical College; New England University of Medicine and Surgery, of Manchester, N. H.; University of Medicine and Surgery, of Haddenfield, N. J., and American Vitopathic College, of Cincinnati, O. It will be noticed that the "Reformers" are very prominent in this business, and that Cincinnati, the hot-bed of "reform," has no less than four of the savory lot. The diplomas of another of its "reform" institutes, not numbered in this list, were until recently not recognized by the Illinois State Board of Health. It was only under promises that it would set itself right that the ban was removed from the institute.—*Michigan Med. News*, March 10.

THE PROPOSED LAW TO REGULATE THE PRACTICE OF MEDICINE IN MASSACHUSETTS.

This bill comes from the Social Science Association. Though the word "quackery" is not mentioned in it, the object of it is to make the public protect itself against quackery in medicine by trying to regulate practice. The word quackery has no definite meaning in the public mind, and it is not possible to give a difinition which will be understood and accepted. It is an indifinite term, the meaning of which varies with each person who uses it.

The Boston *Advertiser* says, "A Thompsonian or a hydropathic physician who has learned by experience how far his system is useful, who employs it only so far, and who when baffled tries remedies which his experience or his reading of medical books suggests, or candidly advises his patient to call in another doctor, is not a quack." It is easier to say what it is not than what it is. But the bill must be to protect people against some definite act or persons. In the public mind the only thing that stamps a man as a quack is, not that he is culpably ignorant, but that he is culpably dishonest, and against such it is willing to protect itself.

No one now-a-days carries his son to a king to be touched for scrofula, nor hangs the image of a malignant tumor on the shrine of a saint to be cured by him; but people still carry their children to Indian medicine men to be cured of hip disease, and bring to people suffering from cancer the remedies put up by those who offer to cure it. Educated people still believe that a man without knowledge of any kind can possess a mysterious tact and faculty for healing. The proofs in their minds are abundant. Innumerable testimonials can be collected from perfectly honest people that they have been cured of every curable or incurable disease. The majority of intelligent men do not think it necessary to protect themselves against people whom they believe to be honest. They go farther than this. The popular feeling is expressed in the Boston *Daily Advertiser:*

"It is a harsh measure at the best to forbid a man to exercise a calling which others may freely engage in, and to take away his sole means of earning a livelihood, and it should apply only to those whose system is a pretentious fraud." This sounds very well, but who is to decide what a pretentious fraud is? The board of examiners, as proposed by the new bill, has nothing to do with the suppression of fraud.

This board of examiners is the key-stone of the new plan, and is in itself a compromise between what the public know as the different schools of medicine. It is to decide who are prepared to practice medicine, while in the profession the diploma of the Havard Medical School will be worth more than the decision of the board, which is merely a legal form that every new practitioner of medicine will have to comply with. The members of the proposed board are not to be professors who know by experience how to examine a candidate, but members of what are called the "State societies," appointed by the governor, and who are likely to have forgotten many things that the candidates will know. Such a bill is likely to be an indirect support to second-rate medical schools; for where will be the incentive to give a thorough medical education to men, if their final examination is not to correspond with their education.

What result is such a bill likely to have? It may oblige a few of the present quacks, whom it wants to get rid of, to go somewhere else, but their places will be filled by others who have licenses, and who will pander to the public belief in and desire for the marvelous in medicine with as little scruple as their predecessors, and with a greater appearance of knowledge, and who will be able to hold up to the public their "permit to practice medicine" as a guarantee that they are considered reliable men by the State.

The members of the Massachusetts Medical Society, who want the public to understand that they are simply physicians, and are neither allopaths, nor homœopaths, nor eclectics, and who consider the assumption of any medical dogma as derogatory, are asked to join with what are called by the public "the different schools" to form a supreme board of examination. By doing so the Massachusetts Medical Society will be considered by the public as recognizing that such schools really exist in the science of medicine, and are not merely devices for securing practice. No legislation can do what is the slow work of time and education. Moreover, who is to prosecute? Who is to pay the expenses? Will a jury be found which will convict any one of quackery in any case that cannot at present be brought up into court under the charge of obtaining money under false pretenses? The object should be, not so much to punish the quack, whom the public believes to be honest, and to be gifted with a wonderful tact in curing disease, as to enlighten the public by exposing him.—*Boston Medical and Surgical Journal*, March 11.

THE USE OF IODOFORM IN ULCERS.

I have just dismissed from under my care, cured, a case of varicose ulcer that had defied the patent ointments that are so much advertised, and had also been under the care of several medical men. Iodoform dusted over the sore twice a week, and a daily dressing of boracic acid ointment, soon made a change in its appearance; and in about fourteen days it healed, and the patient describes the limb as being quite free from pain—a thing quite new to her. A year ago, I had an old soldier under my care with an ulcer of the size of half-a-crown upon the outer aspect of the right leg, four or five inches above the ankle-joint. It first formed in the Crimea, during the first bombardment of Sebastopol, and followed a blow from a splinter. For some years, he took little notice of it, merely keeping it clean. Latterly, he had dressed it with all the patent ointments he saw advertised. It was an ugly, unhealthy-looking ulcer, discharging freely, and was very painful both during the night and when walking. Its depth varied; in the centre, it was quite an inch and a half. Its edges were irregular. The leg was free from varicose veins, and the man was temperate. His occupation entailed much climbing, and he had the ulcer often struck by pieces of timber. I first dusted it with iodoform daily; in a week, every other day; and then twice a week. The effect was marvellous; for in six weeks the ulcer healed, and to this day continues well; the cicatrix is firm; and the man can follow his occupation and take long walks without any pain or inconvenience. I am certain that no other treatment would have healed this ulcer. I have found boracic acid ointment alone to do wonders with ulcers; but, with the addition of iodoform sprinkled on the sore, much more can be done.—W. EASBY, M. D.—*British Med. Jour.*, March 6.

DANGER OF ARSENIC IN DENTISTRY.

Having within a short time met with several cases of the bad effects produced by the injudicious application of arsenic to diseased teeth, I think I ought to bring the subject to the notice of the profession; the more so because I believe that the mischief produced by its agency is rarely traced to its proper cause; also because, from the frequency with which in my own practice I have lately seen it, I think that it is an increasing evil, and one that is far more common than is usually supposed.

A lady applied to me a short while ago under the following circumstances. She had consulted a dentist about filling a second upper molar tooth, decayed low down between it and the third molar. The dentist drilled away the decay; but, finding the tooth sensitive, he dressed it with something to allay the pain, directing her to return in two days. She suffered intensely for twelve hours. On her return the second

molar was filled; and subsequently the two bicuspid teeth (being similarly diseased) were in like manner treated and filled. Day after day, the pain continued with increasing intensity, and chloral had to be given to procure rest. After three weeks of this, when she came to me, she presented the appearance of a patient much exhausted by acute neuralgia. The third molar, which was otherwise sound, was so painful and inflamed that I had to extract it at once. The face was much swollen, the alveolus actually inflamed, and an offensive discharge escaped from the wound. When, on probing the cavity, I felt dead bone, I at once made up my mind that arsenic was the cause of all this mischief. The dentist who applied this solution had bought it (without knowing its ingredients) to destroy the nerves of teeth, and always used it for that purpose. On analysis, it was found to contain almost nothing but arsenious acid. The result of this case was the loss of the three stopped and of one sound tooth, together with the whole of the alveolar wall surrounding them; two months' intense suffering; and all the necessary medical expenses, in addition to my fees and the cost of replacing the lost structures.

In a second case, an officer in India applied a mixture containing arsenic (given to him for the purpose by the army surgeon) between two upper molars, to relieve toothache. He suffered so acutely that he had to come home on sick-leave. He lost all the upper molar teeth and a large part of the maxillary bone.

In a third case, a week after I had taken out a lower tooth which was decayed below the alveolar margin, my patient returned with the usual symptoms of necrosis. Before consulting me, he had used a tooth-tincture, procured from a chemist, to relieve the pain. The result in his case remains uncertain. At present there is considerable constitutional disturbance.

So many cases occurring within the limited area of one man's practice in so short a space of time is suggestive of an enormous amount of preventable misery. Arsenious acid should never be used without the greatest care to avoid its contact with the periosteal lining of the teeth; and patients should take care how they employ all so-called pain-killing tooth-tinctures, etc. It is a valuable agent when skilfully handled, but, if ignorantly or carelessly employed, arsenic may be a "destroying angel."—N. STEVENSON.—*British Med. Jour.*, March 6.

BROMIDE OF ETHYL.

The death of a patient under this anæsthetic at the Jefferson Medical College Hospital will, we suppose, lead to the general recognition of the fact which we have before insisted upon, that it is a dangerous agent. The patient was about to be operated upon for stone in the bladder, but expired as the first incision was being made. As the production of anæsthesia was super-

vised by Dr. Levis himself, it is hardly probable that any valid excuse can or will be offered. Professor Pancoast informs us that he recently saw another case nearly die from the bromide; so that, whilst we can admire the enterprise and courage of the surgeons who have so heartily advocated the use of this substance, we think that they will agree with us that enough has been done for honor's sake, that neither science nor art demands more, and that further experiments will require justification.—*Medical Times.*

TREATMENT OF CANCER OF THE FEMALE GENERATIVE ORGANS BY A NEW (INTERNAL) METHOD.

Prof. John Clay, of Birmingham, England, reports four cases of cancer of the uterus cured by him within a few weeks by means of the internal administration of Chian turpentine. The first case is described as "scirrhous cancer of the cervix and body of the uterus" with excessive hemorrhage, much pain, and marked cachexia; the uterus was so much destroyed that its cavity admitted three fingers readily. Six grains of Chian turpentine with four grains of flower of sulphur were given every four hours. In twelve weeks the patient was much improved in general health, was free from pain and hemorrhages; "the parts feel ragged and uneven and do not bleed on roughly touching them. The speculum shows several cicatricial spots." The os was contracted so as to admit only one finger. In the second case an epithelioma of the os and cervix "literally melted away in the brief period of four or five weeks;" five months after the beginning of the treatment the parts were found to be normal. In the third and fourth cases, both cases of epithelioma, equally good results are claimed.

"Other cases are under treatment, all showing similar effects. Among them are cases of cancer of the vulva, stomach, and abdomen, in which very remarkable benefit has been already produced."

Mr. Clay promises to report the results of his further experience. He says the Chian turpentine alone should be used. The use of the oil of turpentine is inadmissible, on account of the speedy production of its specific effects, even when administered in small doses, and the same objection applies, although in a less degree, to the Venice and Strasbourg turpentines. The maximum continuous dose is twenty-five grains daily, and it is advisable to discontinue the remedy for a few days after it has been steadily administered for ten or twelve weeks. (*Lancet*, March 27, 1870.)—*Archives of Medicine.*

QUININE AS AN ECBOLIC.

By PERCY H. BENSON, M. D., Civil Surgeon, Nagar Division, Mysore.

In the *Practitioner* for April and July, 1877, there is in each a short article on the ecbolic property of quinine, and as this

property seems to manifest itself more often than is generally supposed, I think it will not be out of place to add my experience to that of others. In October, 1876, I was called in to see the wife of a coffee-planter who was suffering from malarial fever (of an intermittent type) contracted the previous year at Peshawur. I was aware of the fact of her being in her third month of pregnancy, but did not in consequence hesitate to prescribe quinine, as the attack of fever was of a somewhat severe nature. She remained free from fever for some time afterwards, but on her return to the estate she experienced another attack and at once treated herself with quinine (but in what dose I cannot say), the result of which was that after a few doses symptoms of labour set in and she aborted. Since then I have met with several cases of malarial fever occurring in pregnant women in different stages of gestation, and have, as before, prescribed quinine in doses varying from five to ten grains daily, without witnessing any baneful results, and I began to think that the previous case was due to some peculiar idiosyncrasy. A few days ago, however, I was called in to see a young native lady æt. 18, suffering from an attack of malarial fever, and who was in her eighth month of pregnancy.

As it was her first pregnancy, and not knowing how she would stand the quinine, I prescribed the following:—

℞ Quiniæ Sulph., gr. v.
Acid Tartaric, gr. iv.
Tinct. opii, ♏x.
Aquam ad ℥i. S. d.

The opium was given in the hopes of counteracting any effect the quinine might have upon the uterus. I gave strict injunctions that she was to have only one dose that night, and that the following morning they were to let me know how she was and I would, if advisable, give her a second dose. About noon, the following day her father wrote up to say that during his absence his wife (who is not able to read English) had given her daughter two doses, so that within twelve hours she had taken fifteen grains of quinine, and that she had, at the time of his writing, suspicious symptoms of labour coming on. It occurred to me that very probably she had been told by some one that quinine had that effect in some cases, and the symptoms were only imaginary. This, however, they did not turn out to be, as early the same evening she gave birth to a living female child. (Owing to cast prejudices I was not called in to see her afterwards, but I have since heard that she is doing well.) This last case is extremely clear, as I am unable to ascribe the onset of labour to any other cause than that of quinine, as when I saw her the night previously she had no symptoms of labour whatever, and had my instructions been carried out, I am of the opinion that this accident would not have occurred, as it was not until the second and third doses had been administered that the symptoms of labour became manifest.

In countries where malarial fever does not prevail, this ecbolic property possessed by quinine does not much signify, but where malarial fever constitutes one of the most frequent diseases, and one which, if not checked early, will, *per se*, induce labour, and whereas quinine is the only efficient remedy, this property becomes of great signification, and I must confess that in future I shall feel inclined to give arsenic a fair trial in cases of malarial fever complicated with pregnancy, before resorting to the administration of quinine.—*Practitioner*, Dec. 1879.

TUBERCULOSIS AN INFECTIOUS DISEASE.

We have at last some daylight let in upon this most obscure field in nosology. Tuberculosis will henceforth take place among the infectious diseases. Tuberculosis is a sort of key-note in the whole gamet of internal diseases, and the most far-sighted pathologists and clinicians have always expended the greater part of their lives in its elucidation. Tuberculosis runs into every department of medicine, into internal medicine, into surgery, into obstetrics and gynecology; it is the key-stone in the arch of pathology. Physicians, surgeons, obstetricians, every one engaged in the science or art of medicine will hail with pleasure anything definite, anything settled in the history of tuberculosis. The transmissibility of tuberculosis has been hinted at long ago, but it has never until now received the sanction of such authority as to establish its acceptance. No one will dispute the accuracy of Cohnheim's investigations or the validity of his conclusions. We present our readers a full abstract to-day of the remarkably lucid and comprehensive report made by Cohnheim to the Leipsic faculty a few months ago.

The report makes an epoch in the history of this disease which in its practical significance far exceeds in value the works of Lænnec and Virchow. It is taken from the *Medizin. Neuigk. f. prakt. Aerzte.* April 3, 1880:

The most important advance in our knowledge of tuberculosis was contributed by Villemin's discovery of the transmissibility of this disease. Although this discovery was doubted for a long time, by Cohnheim as well as by others, it must now be looked upon as a fully established fact, as proven by the following investigation of Cohnheim and Solomonsen:

If the smallest particle of tuberculous matter be carried through a lineal incision of the cornea into the acqueous chamber of the eye of a rabbit, there appears, after a period of incubation of about six weeks, an eruption upon the iris of minute nodules, which increase to a certain size and then undergo caseous degeneration, to be followed in the course of months by a more or less general tuberculosis of the lungs, peritoneum and various other organs.

Of the greatest significance is the fact that this result occurs

regularly, but only when real tuberculous matter has been inoculated. We may therefore utilize this inoculability as a diagnostic criterion of tuberculous product, a fact which is so much the more important in that the anatomico-morphological character of tuberculosis does not suffice in all cases to differentiate this affection with certainty from syphilitic products on the one hand, and on the other from other non-specific, but simply chronic irritative conditions. Neither the nodular form, the histological structure, the occurrence of giant cells, caseation, nor all these circumstances together are absolutely characteristic of tuberculosis. *The only absolutety perfect and certain criterion is the capacity and infection.*

And taking this criterion as a standard we must include as tuberculosis, caseous pneumonia, the so-called caseation of lymph glands, as well as the fungous joint inflammations in most cases, while simple elements like lupus tissues not being inoculable are not tuberculous.

As carriers of the infection of tuberculosis we assume parasitic specific organisms, though it is true that we are not as yet able to demonstrate them with certainty.

The tuberculosis virus reaches the body in the great majority of cases through the inspired air. Thus arises first tuberculosis of the lungs, which may then develop tuberculosis of the pleura, of the bronchial glands and of the great air passages. In some rare cases, the tuberculosis may originate in the larynx. Later the virus is carried by the sputa into the alimentary canal. Thence develops the so frequent classic picture of *pulmonary-intestinal tuberculosis.*

On the other hand, the virus may first enter the digestive canal, an occurrence observed most frequently in children and dependent upon the ingestion of milk from tuberculous cows, that is of cows suffering from the fecal disease. Thus arises the *phthisis mesenäica.* It is probable also that the so-called tuberculous inflammations of the mouth and pharynx, as well as the caseous swellings of the cervical lymph glands arise in this way.

According to the reports of Weigert tuberculous meningitis may then follow in certain cases from a migration of the tuberculous poison into the cranium from the upper nasal cavities. But urogenital tuberculosis is to be regarded as produced through excretion. The tuberculous virus, like other corpuscular elements penetrates the glomeruli, having passed from the blood into the urinary passages and then develops its effects along these preformed canals.

In cases of primary bone and joint tuberculosis which are mostly referred to traumatic causes, it must be assumed that the poison is already in the blood and is simply extravasated by the trauma in greater quantity in the affected regions.

To account for the rapidity and universality of the dissemination of tuberculous products in the cases of acute generalized

tuberculosis we must invoke a profuse inundation of the juicy organs with tuberculous virus. This explanation is rendered probable by the anatomical findings of tuberculosis of the thoracic duct and of the pulmonary veins in such cases.

On the other hand there are many cases, as is well known, of purely localised tuberculosis, in which the disease is found limited to a definite locality. But there is no essential difference in these cases. For the local limitation of the process is either explicable by the short duration of the disease (as in the local tuberculosis of the aged), or, where it has existed long, it is still in process of extension, though the process is slow. But it is perfectly certain that tuberculosis may result in perfect recovery. That the so-called local tuberculosis represents nothing essentially different is proven above all things by the fact that its products are just as inoculable as are those of general tuberculosis. *The relation between local and general tuberculosis is very much like that between chancre and constitutional syphilis.* A chancre, whether soft or hard, may induce a general infection of the body, may do it, but not must do it. Even so is it with local tuberculosis.

For the rest, individual predispositions come into play. In the experimental induction of tuberculosis, differences manifest themselves with regard to the extension of the process and the manner of extension.

But so far as regards the *phthisical habitus*, it has nothing to do with the susceptibility to tuberculosis. It is a product of tuberculosis. Such individuals are already tuberculous, and are tuberculous mostly by heredity. Tuberculous virus can pass into the products of generation, into the semen and ovum. The disease is thus present in the new-born child, but may break out only after a lateral stage of many years, just like hereditary syphilis in which, however,the latest stage is usually shorter. But during this latest stage, the virus present in the body so affects the development of the body as to give rise to phthisical habits.

So, in tuberculosis, everything depends upon the virus. Such a thing as a predisposition to tuberculosis is false. We discover at all points the closest analogies between tuberculosis and syphilis. Both require, above all things, infection, transmissibility of the disease from person to person.—J. T. W.—*Cincinnati Lancet and Clinic.*

THE FUNCTIONS OF THE BRAIN.

One of the most suggestive results of recent researches has been to show that the faculty of intelligent language, as distinguished from simply articulate speech, is situated in that portion of the hemispheres which is called the third left frontal convolution, and its immediate neighborhood. We have al-

ready seen that the pronunciation of letters and words is effected in the lowest portion of the brain, viz: the medulla: but this and all the other inferior organs concerned in speaking form only as it were the instrument on which that small portion of the brain's surface which I have just named is habitually playing. Lower centres are able to hear spoken words, and to see written words; but the intelligent appreciation of the connection which exists between words and ideas, and the faculty of expressing thoughts in sentences—that is, what the Greeks called *logos*—only reside in the third left frontal convolution. This discovery was foreshadowed by Gall, but actually made by Broca, who likewise found that the left hemisphere is altogether more important for intellectual manifestations than the right, and is chiefly trained for talking as well as for most of the finer kinds of work which we have to perform in daily life. This appears owing to the following circumstances. The left hemisphere is originally heavier than the right; the convolutions are more abundantly developed in the left; and finally, the left is more abundantly provided with blood, on account of the larger calibre of the blood-vessels which supply it. Most people therefore train chiefly the left hemisphere for talking, writing, etc.; they are left-brained and they are left-handed. A preponderance of the right over the left hemisphere, on the other hand, seems, according to the most recent researches, to be characteristic of certain forms of insanity.

Physiological experiments on animals point to the convolution I have just named as being concerned in language; for when electricity is applied to the part in the living monkey or rabbit, the animal opens its mouth, and alternately protrudes and retracts the tongue. But far more convincing proofs have been furnished by numerous cases of disease in which there was loss of language during life, and where after death a lesion limited to the part just named was discovered.

A boy, aged 5, who was a great chatterbox, fell out of the window and injured the left frontal bone, which was found depressed. There was no paralysis, but the boy had entirely lost his language. The wound healed in twenty-five days; but the child, although intelligent, remained dumb. A year afterwards he was accidentally drowned, and at the autopsy it was found that the third left frontal convolution had been destroyed by the injury he had received.

A man fell with his horse, but got up, took hold of the reins, and was going to jump into the saddle, when a doctor who happened to accompany him expressed the wish to make an examination. It was then found that he could not speak, but had to make himself understood by pantomime. A small wound in the left side of the forehead was found, with depression of bone; but there was no paralysis. Inflammation set in, the patient died, and at the post-mortem examination it was found

that a fragment of bone had penetrated into the third left frontal convolution, which had become softened.

Talking, writing, drawing, etc., are habitually done by the left hemisphere alone, while both hemispheres have to be trained for musical performances. Pianists educate them both equally, while violinists and violoncello-players have to train them dissimilarly; and this is probably the reason why it requires more practice, and is more difficult, to play well on string-instruments than on the piano.

A man who has, by disease or injury, lost the faculty of talking, is generally also unable to write; and it is only in exceptional cases that one of these functions persist while the other is in abeyance. Cases of this latter kind show, however, that there are really two separate centres for the two faculties, which are lying very close together, and therefore generally suffer at the same time. If the disease affecting them be still more extensive, the faculty of intelligent pantomime or gesticulation is likewise abolished. Persons who have entirely lost their language may still be able to play chess, backgammon, and whist; and they have been observed to cheat at cards with some ingenuity. They may also be sharp in business matters—facts tending to show that speech and intellect do not run in identical grooves.

Those portions of the hemispheres which correspond to the parietal region or crown of the head, and which are called the *parietal lobes*, constitute the true motor region of the brain's surface, and, being in intimate connection with another portion which is the material base of intellect and mind, have been called *psycho-motor centres*, in order to distinguish them from the lower motor centres in the medulla, the central ganglia, etc. The special functions of these pyscho-motor centres have been studied by the application of electricity, by destroying them in the living animal, and also by observation of certain symptoms at the bedside; and it has been shown that each one singly serves some definite purpose, as, for instance, clenching the fist, swimming, grasping something, raising the hand to the mouth, etc. Destruction of these centres causes paralysis of such movements, while irritation of them leads to a peculiar form of epilepsy, in which the convulsions affect only one (the opposite) side of the body, and where there is generally no loss of consciousness.

The next great division of the brain's surface is that which corresponds to the temporal region of the skull. The *temporal lobes* of the hemispheres are intended to act as centres for sensory perceptions. This is likewise shown by galvanizing them in the living animal, and by localized destruction of the same. One portion of the temporal lobe is the centre of the sense of hearing. If it be destroyed, deafness on the opposite side is the result; on the other hand, if it be electrified, the animal is seen to prick up its ears and to assume the attitude of listen

ing, just as it does when a sudden noise is made close to its ear. In those animals whose habit of life render their safety dependent upon the keenness of their sense of hearing, as, for instance, the wild rabbit, and the jackal, galvanization of that part causes not only pricking of ears and listening, but also a quick jump to the side, as if to escape from some danger which would be announced by a loud or unusual noise.

The centre for the sense of smell is situated close by. If it be electrified, the animal begins to sniff, as if it smelt something strong, just as it does when odoriferous substances are placed to its nose. Destruction of this centre causes loss of smell. It is particularly developed in animals which are endowed with a keen sense of smell, such as dogs, cats and rabbits. A centre for the perception of taste is in its immediate neighborhood. Other portions of the temporal lobes are intended for the sense of touch, and there is also a visual centre, destruction of which causes blindness of the opposite side. All these centres are symmetrically arranged on both sides, the left in the brain serving for the right side of the body, and *vice versa.*

A third portion of the hemispheres which we have to consider is the *posterior* or *occipital* lobes, which correspond to the back of the head. Their structure differs greatly from that of the parts more in front, and they receive their blood supply from quite a different set of blood-vessels. Electricity has apparently no influence upon them, and destruction of their substance causes no paralysis nor loss of sensation. Animals from which these lobes have been removed continued to see, hear, touch, taste, smell, and move about just as usual. They generally, however, refuse to eat, and succumb rapidly. We are inclined to look upon these lobes as specially connected with the digestive tract, more especially the stomach and liver, and also with the reproductive organs: yet the symptoms of disease of these lobes are contradictory and perplexing, and our knowledge concerning them is as yet in its infancy.

The last and most important portion of the hemispheres consists of the *anterior* or *frontal* lobes, which correspond to the forehead. They are the actual seat of the intellect. Injury or disease of these lobes does not cause any impairment of motion or sensation; and large portions of brain-matter have occasionally been lost through wounds in these parts without any very striking symptoms, such as paralysis, etc., following, more especially if the lesion was confined to one side. Patients have now and then recovered from the most fearful injuries to the anterior lobes, and yet been able to go about and to attend to ordinary routine of certain occupations; but it has always been shown, on close examination, that there has been a profound change in the character and behavior of such persons, and that their temper and their mental and moral faculties have become deteriorated. In a very marked case of this

kind, which occurred some years ago in a previously steady and clever workman, there was, after recovery from the injury, such a change in the mind of the man that his employers had to discharge him. The balance between his intellectual faculties and his animal propensities had evidently been destroyed. He had become capricious and vacillating, fitful, impatient, obstinate, and, as far as intellectual capacity was concerned, appeared to be a child, which, however, had the animal passions of a strong man. In consonance with such cases is Ferrier's experience with monkeys in whom he had destroyed these lobes. The animals did not appear to have lost the power of motion or sensation, but there was an alteration in their character. While previously to the operation they were actively interested in their surroundings, and pried into everything which came within their sphere, they had after it become dull and apathetic, readily dozed off to sleep, or wandering to and fro in a listless manner; so that it was evident that they had lost the faculty of attentive and intelligent observation.

The anterior lobes have therefore to be looked upon as the organic base of the highest intellectual and moral faculties. The principal part of the work done in life consists of certain movements or actions, which are the more or less immediate consequence of sensations and desires which we experience; but apart from the power of performing such actions, we possess the faculty of restraining or inhibiting them in spite of being urged to their performance by sensations or desires. This inhibitory action is again most intimately connected with the power concentrating attention, without which none of the higher intellectual operations are possible. The anterior lobes are therefore inhibitory centres, intended for the highest kind of mental work and moral control. They are small in idiots and the lower animals, larger in monkeys, largest in man; and their peculiarly large and abundant development is found to coincide with the highest development of intellectual power.

It is probable that a special evolution of certain parts of these lobes will be found to coincide with the presence of certain special aptitudes and talents in individuals; but of this nothing definite is known, and there is in this direction an immense field still open for patient and intelligent inquiry.—*Physician and Patient*, May, 1880.

THE CAUSE OF MALARIA.

By JOHN S. HITTELL.

The eleventh volume of the *Archiv. fuer Experimental Pathologie und Pharmakologie*, published in 1879, contains an essay covering 86 octavo pages in print, by Prof. E. Klebs, of Prague, and Prof. Corr. Tommasi-Crudeli, of Rome, entitled: Studies of the Cause of Intermittent Fever, and the Nature of Malaria. I propose in this article to give an account of those studies.

with my reasons for rejecting or at least hesitating to accept their conclusions.

While traveling over meteorological ground, I stumbled upon malaria, which thus forced itself on my attention, and the more I looked at it, the more reasons I saw for regarding it as a "chill-poison," and those reasons were submitted to the medical public in this Journal for September, 1878. Having thus put my hand to the plow, I could not turn back; so, when the first announcement of the investigations of Prof. Klebs and Prof. Tommasi-Crudeli reached me, I wrote a short article for the Journal of December, 1879, and having received their full report I must again take up the matter.

Having studied the literature of malaria and come to the conclusion that the disease is carried by some microscopic plant or animalcule found in swampy soils, those gentlemen began their joint researches in the spring of 1879, selecting the Roman Campagna as the best field of observation. By careful and ingenious processes they collected from samples of surface earth and from the lower strata of the atmosphere in the marshes, a number of minute plants, one of which they found would live and multiply in semi-fluid gelatin, white of egg and wine, while the others languished or died. This *Bacillus malariæ*, as they afterwards named it, was used by hypodermic injection on about 20 healthy rabbits, which were subjected to hourly measurements of temperature during the day for a week or two and were afterwards dissected.

All the infected rabbits showed every malarious symptom that could be looked for in brutes. The temperature in the rectum was 103° Farenheit (30°.5 centigrade); in the healthy animal after infection it rose to 105½° (40°.85 c.) and fell to 101° (38°.4 c.) with numerous fluctuations. Some rabbits had quotidian, others tertian, others quartan fever. In every one the spleen was enlarged, usually to double size, and in one case eight-fold, without inflammation; in all the marrow and spleen were dark-colored, and usually chocolate-colored. The *Bacillus* was found in the blood, spleen, and marrow of the infected rabbits. At the request of Klebs and Tommasi-Crudeli, Dr. Marchiafava, of Rome, examined the corpses of three persons who had died of malarial fever for the Bacillus, which he found in the spleen, marrow, and blood of two, and in the spleen and marrow of the third, whose blood was not inspected; and the enlargement of the spleen to double the normal size, and the dark coloring of the spleen and marrow were found in two. The *Archiv.* gives the history of every rabbit hour by hour, with diagrams of the fluctuations in weight and temperature; and engravings show the *Bacillus* in its different forms, and the spleen of the rabbit in its healthy and diseased sizes. I do not go into the detail here because I assume that nobody will question the circumspection or precision of the experiments. The evidence, as I have summarized it, proves conclusively that by

these hypodermic injections every rabbit was infected with a disease bearing a remarkable resemblance to malarious fevers in human beings. The report of Prof. Klebs and Prof. Tommasi-Crudeli abounds with marks of their ability, learning, zeal and good faith, and the publication of their researches makes an epoch in one of the most important branches of pathology.

While accepting all their observations, I reject their inferences that the *Bacillus* caused the disease in the infected rabbits, that this disease is the same as malarious fever in the human being, and that malarious fever never appears in man until he is attacked by the *Bacillus*. Before that plant shall be recognized as the cause of malaria, medical science should demand satisfactory answers to the following questions:

Is the *Bacillus malariæ* found in all persons suffering with malarious fever? Three autopsies are not enough to prove that fundamental point.

Is it not equally abundant in individuals afflicted with other diseases? On that point we have not the least light.

Is it not equally abundant in healthy persons? No reply so far to that.

Is it not equally abundant in the soil and air of healthy and malarious districts?

Is it not as abundant in marshy ponds as in marshy soils? Klebs admits that where the water covers the land there is little or no malaria, and he made one examination of marsh pond water at Capolace, finding no *Bacillus*, but that one test is not a sufficient basis for the universal rule requisite to his theory.

Is there much more *Bacillus* in the air within ten feet of the ground, where the main danger lies, than above? As to that we have no information.

Is there more *Bacillus* in the atmosphere while the ground is moist with dew (the only time when there is much danger of catching malarious fever) than in the dryer and warmer hours of the day?

Does the *Bacillus* die when introduced into a room heated by a fire at night, where there is little risk of malarious infection?

Does the *Bacillus* die or lose its activity or power of reproduction at those low temperatures which check malarious disease?

Does quinine kill or debilitate the *Bacillus*?

Would not the rabbits have been infected in the same manner by hypodermic injections of gelatin and wine without the *Bacillus*?

Did not the *Bacillus* exist in the rabbits before the hypodermic injection was administered?

Does the rabbit catch the malarious fever in malarious districts naturally, and if not, why not?

Can malarious disease be transferred from one rabbit to another by inoculation, or from one person to another, or from person to rabbit, or rabbit to person? Every physician in a

malarious district can experiment upon the inoculation of the rabbit, and make observations on temperature, spleen, and marrow.

The alleged discovery claimed to have been made by Prof. Klebs and Prof. Tommasi-Crudeli is of such immense importance that anatomy, physiology, pathology, therapeutics, microscopy, chemistry and meteorology should combine their forces for immediate, energetic and exhaustive investigation of all the problems involved. Not until we thoroughly understand the cause of malarial fever can we expect to prevent its fearful ravages, which impoverish and carry off a large part of the human race, and condemn extensive regions of the earth's most fertile surface to conditions akin to barbarism.—*Pacif. Med. and Surg. Jour.*, May.

ATTACHMENT OF THE PREPUCE TO THE GLANS PENIS.

Dr. Simmons, of Yokohama, Japan, adds another to the many cases in which detachment of a glandulo-preputial adhesion was followed by relief from symptoms referable to the nervous system. This was the case of a boy of twelve years, who, about a year previous to the operation, had experienced disturbed sleep and slight convulsive movements, which increased in severity and in two or three months assumed the form of decided epilepti-form seizures, which finally occurred once or twice every night and varied in duration from ten to fifteen minutes. These seizures were followed by unconsciousness of about an hour's duration. They occurred only at night. Detachment of the prepuce from the glans was followed by complete cure. Dr. E. C. Dudley, of Chicago, has recently reported a similar operation in a case where the adhesion involved the entire glans from the corona to the meatus. The patient was a delicate boy, four years of age, who had suffered day and night from incontinence of urine for more than two years. His locomotion had been impaired in such a manner as to cause suspicion of partial paralysis of the tibialis anticus muscle on one side. The operation was followed by perfect cure, both in respect of the incontinence and of the supposed paralysis. It is believed that few operations in all surgery are more satisfactory than this.—*Chicago Medical Gazette*, April 20.

CELLULITIS AS A CAUSE OF UTERINE DISEASE.

The object of this article is to show that uterine catarrh, if not in a majority, then in a large number of cases, depends, not upon any of those conditions which have been called by such names as metritis and endometritis, but rather upon obstruction to the circulation in the broad ligaments, due to cellulitis. The uterus receives its vascular and nerve supply through the broad ligaments, and the exceptionally large

supply of vessels and nerves going to and from the cellular tissues of the pelvis, and transmitted through these ligaments to and from the uterus, renders them peculiarly liable from cold and from many other causes to a vaso-motor neurosis, which may commence in a disordered capillary circulation, go on to perverted nutrition, and finally result in that condition vaguely called inflammation. It is, therefore, reasonable to presume, à priori, that these cellular tissues, particularly the broad ligaments, are very liable to be the original seat of inflammation. The history of uterine catarrh in the virgin generally includes the history of a previous cellulitis. The patient will frequently remember that her uterine trouble followed a sickness which was characterized by exposure to cold often during the period, by chill, by severe pain in the pelvis, commonly unilateral, by high temperature, by rapid pulse, nausea, and flexure of the thighs,—in a word, cellulitis, the remains of which will generally be evidenced by tenderness upon pressure per vaginam, by shortening and by thickening of the broad ligament.

The subsequent history of such an inflammation in the broad ligament would be obstruction of the circulation to and from the uterus, and by as much as the veins are more compressible than the arteries, and less aided in the transmission of blood by the vis a tergo, this obstruction will be rather venous than arterial. The uterus, therefore, would become the subject of venous congestion, and thus gorged with blood it would seek to relieve itself through the channels offering least resistance, and the natural secretion of the mucous follicles would, therefore, soon change to an abundant leucorrhœal discharge. The epithelial membrane of the cervix, itself congested and irritable, and continually bathed in this discharge, would gradually suffer erosion or even partial destruction. The uterus, heavy from congestion and enlargement, may then fall to a lower plane in the pelvis, and the broad ligaments may be put upon the stretch, causing additional obstruction, since the vessels which we have said traverse these ligaments are so freely looped one upon the other that even slight traction causes the compressible veins to collapse.

We now have, in virtue of venous obstruction, a pelvis overcharged with stagnant venous blood. This would furnish a rational explanation of much that goes to make up the picture of uterine disease, especially among virgins, as commonly met in practice; congestion, displacement, hypertrophy. All that belongs to the phenomena attendant upon the so-called endometritis and endocervicitis is manifest in the uterine discharge. Even a form of that time-honored nonentity, ulceration, is explained by the erosion. These various conditions appear as facts only, not as diagnoses. The diagnosis may be found in the inflamed cellular tissue of the pelvis.—*Chicago Medical Gazette*, April 20.

A CERTAIN CONTRAINDICTION TO TOPICAL APPLICATIONS TO THE UTERUS.

We have seen in the foregoing editorial that intrauterine catarrh and erosin of the cervix may depend upon celulitis in the broad ligament. Indeed, if we accept parturition, mechanical injuries and gonorrhœa as causes, the catarrh may be generally traced to pelvic cellulitis. Dr. Emmet declares that he has generally found disease of the uterus and ovaries associated with cellulitis, and that in cases which he has been able to observe early, he has noted the prior existence of the cellulitis, except in those cases already mentioned, in which the inflammation occurred primarily from parturition, mechanical injury or specific disease. Where cellulitis has once existed in the tissues adjacent to the uterus, it is extremely liable to be rekindled by the use of the sound, by too early replacement, or by any of the manipulations common to the treatment of uterine disease. Great care, therefore, should be taken to avoid the causation of more cellulitis; otherwise we may add to the trouble in our attempts to relieve it. If the endometrial membrane be innocently striving to relieve the uterus of its engorgement of blood by a secretion, shall we treat it with destructive applications or direct our attention to the cause of this obstruction in the broad ligaments? Topical applications to the cervix and to the interior of the uterus are often made to the detriment rather than to the benefit of the patient. The experience of the past twenty-five years shows that these applications have their place, and that they may be used to advantage in a very large number of cases, but the tendency of the present day is properly to their exclusion in all of those cases dependent upon or associated with cellulitis until the latter has been practically removed; and always the application should be mild. In the management of uterine disease dependent upon cellulitis great reliance may be placed upon time. In addition to this the hot-water vaginal douche is the most satisfactory agent. But, in order to obtain beneficial results, it must be properly and systematically applied. Other treatment must depend upon general principles; hygiene, food and tonics are important. But it is of the utmost importance to guard the patient against a relapse of the cellulitis. Indiscriminate uterus swabbing has no place in the management of such cases.—*Chicago Medical Gazette*, April 20.

INDISCRIMINATE USE OF CARBOLIC ACID.

With due regard for the opinions of the more progressive and aggressive members of the profession, we respectfully direct attention to some of the dangers which attend the indiscriminate use of carbolic acid in the form of spray, as an application to extensive raw surfaces and as an injection into abscess cavities. In the fervor of their devotion to the teachings of Lister,

physicians are apt to lose sight of the fact, and sometimes do lose sight of it, that carbolic acid, in undue concentrations and amount, may operate with fatal energy as a local irritant, and may even destroy life through its constitutional influence. The small atomizers so extensively used in former years are rapidly being displaced by instruments that produce a heavier cloud of vapor. These larger apparatuses are now employed with the almost inevitable concomitant of carbolic acid, not only as a safeguard against the contact of living aeril germs with fresh wounds, and their introduction into abscess, joint and peritoneal cavities, but they are used also in the treatment of diptheria and other infectious diseases This is the "modern" plan. Still, we have no hesitation in saying that the antiseptic, used in this hazardous fashion, is sometimes the immediate cause of death. It is not uncommon in cases of diphtheria and the anginose variety of scarlatina to find the atomizer at play in a small super-heated room with the stream of carbolized vapor aimed directly at the face of the child. Examples of this sort have occurred under our observation several times, and in two instances we have witnessed unmistakable symptoms of carbolic acid poisoning. To say the least, the dangers of urinary suppression are not lessened by this practice, and the chances of ultimate recovery are not increased. In two instances of diphtheria in very young subjects we have found the atmosphere so strongly impregnated with the acid as to make it impossible for the adults in attendance to remain in the room longer than a few minutes at a time. In another case of diphtheria we found chlorate of potassium to have been used with such a degree of thoroughness with the atomizer that every article of furniture in the room was covered with minute crystals of the salt. And physicians—modern physicians—rejoice in the success that attends this line of practice! But this is not all. The surgical uses of the spray are no more free from danger than the medical uses referred to. A case has recently occurred within the scope of our knowledge wherein one of our most distinguished gynæcologists appeared to overdo the matter of antiseptic precaution. The case was one of ovariotomy. The room was duly prepared for the patient by thorough ventilation and impregnation of the atmosphere with the great protective. Proper attention was paid to temperature, and Peaslee's artificial serum was prepared with care. Everything and everybody was disinfected. The patient was now anæsthetized, and two atomizers—the largest size, gotten for the purpose—were set at play, the streams of vapor meeting and making a dense cloud over the bloody chasm in the patient's abdomen. The vapor was so irritating that three of the attendants and the operator himself, exhibited a day or two later various degrees of cutaneous inflammation. The gentleman who administered the anæsthetic had an eczematous eruption on his hands which remained nearly two weeks.

The patient died with symptoms of peritonitis, and the result was ascribed, we are informed, to the insalubrity of the hospital (not the County Hospital) in which the operation was performed. Again, the introduction of solution of carbolic acid into cavities and their application to wounds has in several instances been known to occasion alarming and even fatal effects. This is well known in relation to the carbolic acid treatment of hemorrhoids. It is getting to be equally well known in relation to injection in other parts of the body. A case in point: A patient was under treatment for rectal ulceration. The ulcers had been cauterized with nitric acid, and a cotton tampon that had been introduced remained in situ about twelve hours. The following day the tampon was removed and a one per cent. solution of carbolic acid was thrown into the bowel. Profound shock followed the injection almost immediately, and we supposed that rupture of a thinned portion of the rectal wall had occurred, and that the fluid had passed into the peritoneal cavity. The breathing was very feeble and slow, and the wrist of the patient was pulseless. Hypodermic injections of brandy were administered and the patient ultimately recovered.

Several examples of this general character are on record. The Medical Times for March (extract from Wien Med. Wochens.) refers to three, of which one was fatal. The acid had only come in contact with the skin. In the fatal case the poison was discovered in the urine. None had been swallowed. At a meeting of the New York Clinical Society, January 23, 1880, Dr. Smith described a case of poisoning which resulted from the injection of one to thirty solution into a large abscess cavity above the knee joint. The symptoms were those of shock, faintness, pulselessness, dilated pupils, and vomiting. Subsequently pain occurred over the lower part of the back, which was attended with temporary arrest of urinary secretion. When secretion was restored—for recovery ensued—the urine was found to be very dark. At the same meeting Dr. Peabody referred to three cases of a similar nature. One consisting of the accidental contact of the strong acid with the skin, and the production of extensive inflammation and corrosion. The urine was very dark. Death occurred within a week. At the autopsy intense nephritis was found. The other cases related by Dr. Peabody resulted from the use of a one to twenty solution with the atomizer. The symptoms were those of collapse, but recovery finally ensued. In addition to these cases of poisoning, Sonnenberg reports six others as having occurred, mostly in young subjects, at Luecke's Clinic, at Strassburg. The record, together with experimental observations on lower animals, shows plainly the danger of introducing acid into large cavities. The case of Dr. Katzenbach is one in point: He had just aspirated a hepatic abscess. Immediately after he injected through the aspirator needle a quantity of the aqueous solution of the acid into the cavity. Such a degree of shock was developed that it

necessitated the free use of stimulants, and the maintenance of artificial respiration for over an hour. Many other examples of this general nature might be cited, but we have already said enough to show that the antiseptic uses of carbolic acid are fraught with danger.—*Chicago Medical Gazette*, May 5.

THE POISON BILL.

The following is the text of the poison-law enacted at the last session of the legislature:

§ 1 *Be it enacted by the General Assembly of the Commonwealth of Kentucky*, It shall be unlawful for any person to sell, either by wholesale or retail, any poison without distinctly labeling the bottle, box, or paper, and wrapper or cover in which said poison is contained, with the name of the article, the word poison, and the name and place of business of the seller.

§ 2. It shall likewise be unlawful for any person to sell any poison without being satisfied that the buyer has attained his lawful majority, and that the poison is purchased for legitimate use.

§ 3. It shall be the duty of every person selling a poison at retail, before delivering the same to the buyer, to make, or cause to be made, an entry in a book kept for that purpose only, stating in the form set forth in schedule A, annexed to this act, the date of sale, the name and address of the purchaser, the name and quantity of the article sold, and the purpose for which it is stated by the purchaser to be required, and such book is to be preserved for at least five years after the date of the last entry, and is to be always open to the inspection of the coroner and the officers of the different courts.

§ 4. *Be it provided*, That no article shall be considered a poison, within the meaning of this act, unless such article be enumerated in schedule B annexed to this act, or shall hereafter be declared a poison by law.

§ 5. *Be it also provided*, That nothing hereintofore contained shall apply to, or in any manner whatever interfere with, the compounding and dispensing of medicines and poisons upon the prescription of medical practitioners.

§ 6. Any person who shall violate any of the provisions of this act shall be sentenced, upon conviction, to pay a fine of not less than five dollars nor more than one hundred dollars for each offense.

§ 7. This act shall take effect from and after its passage.

SCHEDULE A.

Form in which dealers in poison shall keep their poison-book:

Date	Name of purchaser.	Name and quantity of poison sold.	For what purpose said to be required.	Remarks.

SCHEDULE B.

The following articles shall be considered poisons within the meaning of the "Act to regulate the sale of poisons:"

Aconite—root and leaves, and the following products and preparations made from them: Aconita and its salts, extract, fluid extract, tincture.

Arsenic—and the following compounds and preparations: Arsenic acid and its salts, arsenious acid and its salts, arsenic iodide, Donovan's solution, Fowler's solution, hydrochloric solution of arsenic, solution of arsenite of sodium, Paris green.

Belladonna—root and leaves, and the following products and preparations made from them; Atropia and its salts, extract, fluid extract, tincture.

Canabis Indica—and the following preparations made from it; extract, fluid extract, tincture.

Cantharides and the tincture.

Cotton root and root bark, and all of its preparations.

Croton oil.

Cyanide of potassium.

Digitalis, and the following products and preparations made from it; Digitalis, extract, fluid extract, tincture.

Ergot and all of its preparations.

Fish-berries and all of its preparations.

Hydrocyanic acid.

Mercuric ammonia chloride (white precipitate).

Mercuric chloride (corrosive sublimate).

Mercuric iodide (red iodide of mercury).

Mercuric nitrate (salt and its solution).

Mercuric oxide (red and yellow precipitate).

Nux vomica and the following products and preparations made from it; Brucia and its salts; extract, fluid extract, tincture, strychnia and its salts.

Opium and the following products and preparations made from it; Morphia and its salts; tincture (laudanum and deodorizer), acetic, tincture, wine, vinegar, extract, Battly's sedative, solution of bi-meconats of morphia, solution of morphia.

Savine and the fluid extract.

Veratria.

Veratrum viride and veratrum allum, and the following preparations made from them: Fluid extract, extract, tincture.

Volatile oil of bitter almonds.

Volatile oil of pennyroyal.

Volatile oil of savine.

Volatile oil of tansy.

Proprietary or secret medicines recommended, sold, or advertised as emmenagogues or parturients; and all such as are known or advertised to contain a large proportion of opium or other powerful narcotic.—*Louisville Medical News.*

CASE OF CONGENITAL UNILATERAL TOTAL COLOR BLINDNESS.

The case is reported in the *Centralblatt für Praktische Heilkunde.* The difference between the two eyes was noticed by the child itself when three years old. At seventeen years of age, the girl was very completely examined as to the retinal function by Becker and Kirchoff. Acuity of vision was normal in both eyes. The right recognized all shades of colour correctly, the left recognized none, but saw all as shades of grey. The perception of solidity in stereoscopic pictures was present in high degree. The perception of differences of illumination was a little inferior in the colour-blind to that in the normal eye. One maternal uncle was an artist, reputed as a colourist; another was colour-blind.—*London Medical Record.*

MEDICAL NOTES

To Remove Plaster of Paris from the Hands.—Dr. T. E. Wilcox, Surgeon, U. S. A., says that a little bicarbonate of soda or potassa, added to the water in which the hands are washed, after applying plaster of Paris bandages, etc., immediately removes the unpleasant feeling left by the plaster.—*Toledo Med. and Surg. Jour. Va. Medical Monthly.*

Hydropluoric Acid evaporated in the proportion of one gramme to each cubic metre of the sick-room, and thus inhaled by the patient, is said by Henri Bergeron to be a certain remedy for diphtheria. The evaporation should require three hours. "All who have submitted to this treatment for forty-eight hours recovered."—*Cincinnati Lancet and Clinic.*

Lager Beer.—The recent recommendation of this beverage in the treatment of stone in the pelvis of the kidney wings, evokes the following from the *Cincinnati Lancet and Clinic*: "This preparation has long been used in Cincinnati as a cure for stone in the scrotum. Having carefully observed a series of cases under treatment for some months, we are obliged to report more failures than cures of this horrible disease, which statistics informs us affects nearly one-half of the human family; however, we are not discouraged and will give the next new remedy proposed a fair trial.

Quintuple Birth.—A woman living near New Glasgow, N. S., recently gave birth to five children, all of whom have, however, died since. Dr. P. D. Keyser, of this city, has exhibited to us a photograph of the quintuple babies lying side by side in their "little bed." The photograph was sent him by Dr. Hyde, of Truro, N. S., who stated that the children would probably have lived, if they had had any chance. The parents were extremely poor, and lived six miles away from where any thing could be got for them. There was nothing in the house to wrap them up in, and the doctor had to take the blind from

the only window to make bandages.—*Medical and Surgical Reporter.*

Tartrate of Morphia.—The *Medical Press and Circular* recommends the tartrate of morphia, a new preparation. Being very soluble, it passes quickly out of the system, and does not cause the frequent unpleasant after effects of the acetate and muriate. Its great solubility makes it especially useful for subcutaneous injections. It gives rise to but little smarting or irritation, and does not clog even the finest muscles.—*Boston Medical and Surgical Journal.*

Prolapsus Ani.—Dr. T. M. Lownde, in *British Medical Journal*, says that a grain of Barbadoes aloes, with two or three grains of pepsin, in a pill every evening after the last full meal will usually give immediate relief.—*Canadian Journal of Medical Science.*

Treatment of Anal Fissure.—Instead of employing forcible dilutation, Dr. Hannon (*Le Practicien*) applied to the fissure, with a camels hair brush, a solution consisting of one part chloroform to two parts of alcohol. Two or three applications, at intervals of two or three days, usually suffice to effect a cure. The first application is very painful, but each subsequent one becomes less so,—*Medical Press and Circular—Louisville Medical News.*

Gonorrhœal Opthalmia.—Mr. C. Bader, Opthalmic Surgeon to Guys Hospital (*Lancet*) recommends the local use of mercury in this affection. He uses an ointment, consisting of nitric oxide of mercury, one grain, daturin, one-fifth of a grain, valeline, one ounce. Five cases are reported in which the disease was of a severe type, and in which this treatment was used with most gratifying success. The ointment is applied with a large camels-hair brush beneath the upper eye-lid, and the eye then bound up with lint smeared over with the ointment.

Post-Nasal Catarrh.—Dr. Joseph Rogers writes to the *British Medical Journal*, in the *London Medical Record*, which frequently contains useful hints for the general practitioner, I saw lately a formula for the treatment of post-nasal catarrh. It was, I believe, originally suggested by Dr. Duffin. It consists of oxide of bismuth, powdered gum acacia, and small quantity of muriate of morphia. This should be well mixed and then, if used as a snuff in severe coryza or post-nasal catarrh, it acts in a most charming manner. Cases of great severity and long duration have yielded to it after three or four days.—*Boston Medical and Surgical Journal.*

Catalogue of the National Medical Library.—In the discussion before Congress on the general deficiency bill, March 16th, Mr. Singleton, of Mississippi, spoke in a manner which would show his opposition to the printing of the subject

Catalogue of the Library of the Surgeon General's Office, United States Army, by characterizing the resolution which authorized the printing of the first two volumes as having been *sprung* upon the house on the last day of the previous session, and inferring that the work in the main was for the cataloguing of *antiquated books*. He needs to be thoroughly interviewed by some of the medical profession of his State.—*Boston Medical and Surgical Journal.*

Editorial Department.

This number of the JOURNAL is the first of Volume Eight of the New Series. Our friends will perceive that we have enlarged the JOURNAL to such an extent that it will afford them twelve hundred pages of matter a year. We venture to hope and believe that its practical value will be increased commensurate with its increased dimensions. We have kept our periodical severely aloof from all questions which were not supposed to be of practical value. We have only looked to the one great end of making it as useful as possible to that serious class of our profession who devote their lives to its arduous and responsible practical duties. If the amount of support afforded the JOURNAL by our brethren is to be interpreted as evidence of appreciation of our work, we the editors, gratefully acknowledge the marked compliment paid us. We believe ourselves to be in a position now to promise that the interest and value of our JOURNAL shall grow with its increase in age and volume.

A correspondent writes as follows: "Every one of the family except B. has had an attack of fever, lasting five or six days, and resembling dengue. Some of our friends insist that the cutting of the street in front of the house is the cause. What is your opinion?"

We are willing to admit that laying bare and cultivating the soil of malarial localities are positively favorable to the evolution of that poison. Beyond this, however, we are utterly skeptical in respect to that ancient opinion which holds that,

whenever or wherever the earth is excavated, the seeds of disease are disengaged. From the earliest historic days of man to our own time, when assailed by direful epidemics, his superstitious fears have generally suggested causes which the science of the present era proves to be incorrect. Often these calamities were referred to planetary influences and the old latin proverb, "Astra regunt Homines, et regit astra Deus," was a sufficient explanation of the occurrence of epidemic sickness.

It is scarcely likely, when Hesiod penned that verse which represents the earth and sea as "full of maladies," that he had any views of the germ theory of disease which we now hold. It is much more probable that with him, as with all the ancients, every form of pestilence was regarded as a hideous entity, whether material or immaterial.

> "Th' earth's full of maladies, and full the sea,
> Which set upon us both by night and day."

We wish those of our readers who have observed for themselves any facts proving that excavating the soil does produce epidemic disease, will communicate them to us for publication.

THIRTY-FIRST ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION,

Held in the City of New York, June 1, 2, 3 and 4, 1880.

This Association met in the hall of the Y. M. C. Association, on Tuesday, June 1st. The meeting was called to order at 11 A. M., by the President, Lewis A. Sayre, M. D., of New York.

Prayer was offered by Rev. W. F. Morgan, D. D.

Dr. T. Gaillard Thomas delivered the address of welcome and extended to the Delegates of the Association the cordial hospitality of the city.

Dr. Thomas remarked: "Sixteen years had passed since the Association last honored the city with a visit, and for a moment a pause was made to consider what those years had borne upon their wings. The struggle which at that time convulsed our land had given way to peace, and unity and concord had made glad the blessed land which we proudly called our home. Within the sixteen years many changes had taken place in the great metropolis, but none more evident than in that department upon which their affections, their best wishes, and their highest ambition were fixed. It would be the pleasure of the profession to exhibit to them, not the palaces in which New York

bankers conducted the finances of the world, nor those in which her merchant princes carried on traffic which knew no limits but those of the earth. but it would be to show how those men housed and clothed the sick and needy, and to lead the fellows until a pleasant fatigue overtook them through miles of well appointed hospital wards, whose hygienic appointment would put to blush those of the stateliest palaces of European Kings, and convince, by incontestable evidence, how true, how loyal, and how sincere an appreciation of the science and art of medicine the representative city of America had acquired. It should, to-day, be known as the "city of noble charities," the home of healthy and vigorous science."

The Secretary, Dr. W. B. Atkinson, of Philadelphia, then read the list of names registered, 372 in number, and on motion by Dr. J. M. Toner, of Washington, they were confirmed.

THE PRESIDENT'S ADDRESS.

THE PRESIDENT then delivered his address, from which we quote the following:

"*Gentlemen of the American Medical Association*:—Before entering upon the duties of this high office to which you have elected me, I wish to return to you my sincere thanks for the distinguished honor thus conferred, and to pledge you that I will endeavor to discharge its duties to the best of my ability.

"No one can feel more keenly than I do my own incapacity properly to fill the distinguished position to which you have elected me, or more sincerely regret that some other member, more competent and more worthy of the honor, had not been elected in my place. But as your too partial friendship has thus elevated me to this position, I must appeal to your generosity to overlook all shortcomings, and shall rely upon your mutual aid to assist me in the discharge of the important duties thus imposed. Who can properly appreciate the immense value which this Association has already been to the medical profession throughout our whole country? Contemplate for a moment the difference in the *morale*, the devotion to scientific investigation, the mutual respect and good feeling between its members at the present time, and its condition when the Association was organized. At that time there were often envyings, jealousies and heart-burnings, fault-finding, and traduction; those who had achieved distinction were frequently slandered and abused by those who had not been so fortunate; the slightest imperfection of a professional brother was magnified into such undue proportions as completely to obscure any really good qualities or attainments which he might possess, and thus the whole profession was injured in the estimation of the public by the rivalries, bickerings, and jealousies that existed among its members. Now, each one seems so engaged in endeavoring to improve himself and elevate his own position in the profession, that he has no time to devote to studying his neighbor's

faults, much less to accurately scrutinize and publicly herald his seeming defects. The science of medicine has been so much enlarged in all its different departments by the minute search now demanded, and by the great and rapid progress of many of its specialties, as to require that every moment of a man's time be occupied in the closest study if he would keep himself abreast with the daily improvements in our profession, and he who is thus occupied has no time to study the defects of others. By this constant effort to improve ourselves and advance our science, the tone of the whole profession is elevated, and we already see that medical men are more and more respected by the community at large."

On motion, by Dr. Wm. Brodie, of Michigan, a vote of thanks was tendered to the President for his able address, a copy requested for publication, and the recommendations which it contained were referred to a Committee of five to report upon during the present meeting.

MEMBERS BY INVITATION.

The names of 106 physicians were read and they were made members by invitation.

RESOLUTION OF CONDOLENCE.

Dr. S. D. Cross, of Philadelphia, moved, with appropriate remarks, that the Association tender to their President, and, through him, to the family, their warmest sympathy in their sad bereavement by the death of Dr. Charles H. H. Sayre. The motion was adopted by a rising vote.

REPORT COMMITTEE ON PRIZE ESSAYS.

The Committee on Prize Essays, through its Chairman, Dr. Austin Flint, reported that they did not feel warranted in awarding a prize to the single essay presented. Accepted and adopted.

The reports of other committees were announced, and received the usual reference.

SECTION ON PRACTICE OF MEDICINE.

J. S. Lynch, M. D., Chairman, W. C. Glasgow, M. D., Secretary. The first paper on the Classification of Remedies, was read by Dr. W. H. Thomson, of New York. Dr. Thomson referred to the many classifications of remedies already in vogue, and the objections which can be found against each.

The classification proposed by Dr. Thomson, is as follows:

ORDER I—DISEASE-MEDICINES.

Class I.—Restoratives, which are natural to the system.

Class II.—Alteratives, which are unnatural or foreign to the body. These medicines cease to act remedially when they begin to produce symptoms. It is well to give the

restoratives with the alteratives, as it will put off or prevent the development of symptoms.

ORDER II—SYMPTOM-MEDICINES.

CLASS I.—Neurotics, which affect nerve-functions.
(A) Those which are both stimulants and sedatives, as opium.
(B) Stimulants, as ammonia.
(C) Sedatives, as aconite.
CLASS II.—Glandular medicines.
CLASS III.—Astringents.

The advantages of this classification are that it helps the student in studying the action of medicines, and the practitioner in administering them intelligently.

The paper of Dr. Thomson, being open for discussion.

Dr. Roberts Bartholow spoke of the interest which the paper had been to him. He said, however, that certain fundamental objections occurred to him, as to the classification into disease and symptom-medicines. Opium would be an illustration. Thus, opium, in small doses, had an entirely different effect when given in large doses, and any classification based upon doses could not be established. Again, there were drugs which, though symptom-medicines, did sometimes cure disease; thus, digitalis will cure dilatation of the heart. Again certain symptom-medicines will produce structural changes; thus, opium, if given continually, will produce anæmia.

Dr. Bartholow was of opinion that no correct classification of remedies could be made at present, as our knowledge is insufficient.

The next paper read before this section was entitled, A Case of Occlusion of One or More of the Cerebral Sinuses, by Dr. W. O'Hara, of Philadelphia.

SECTION ON SURGERY AND ANATOMY.

W. T. Briggs, M. D., Nashville, Tenn., Chairman. C. Powell Adams, M. D., Hastings, Minn., Secretary.

In the absence of the permanent secretary, Dr. Cummings, of Arkansas, was elected temporary secretary. Dr. Adams, however, came later, and took his seat as secretary of the section.

Dr. Benj. Lee, of Philadelphia, read a paper on Spinal Extension, illustrated by numerous diagrams and accompanied by the demonstration of the author's apparatus. "Phimosis as a Cause of Nervous Symptoms with Results of Operations" is the title of a paper read by Dr. Beard, of New York. This paper was discussed by Dr. Hart of Plainfield, Dr. Maxwell of Delaware, Dr. Weldon of Ithaca, Dr. Lee of Philadelphia, Dr. Herrick of Cleveland, Dr. Cronin of Buffalo, and Dr. Hard of Illinois.

Dr. John T. Hodgen, of St. Louis, read a paper "On Section of the Infra-Orbital and Inferior Dental Nerve, for Neuralgia." He said that by using a hook, or an elevator, after section of the nerve, this might be drawn out of its canal and then nipped

off. This was done to preclude the possibility of the re establishment of union, which would lead to the return of neuralgia.

The details of his methods of operation were then given. The inferior dental nerve was exposed by suitable incisions, and then looped up and cut. He had operated on twelve patients, operating in all twenty-four times. Sometimes, when the infra-orbital had been cut, the neuralgia had attacked the inferior maxillary and vice versa.

In 4 cases 1 operation had been done.
In 3 cases 2 operations had been done.
In 4 cases 3 operations had been done.
In 9 cases 1 nerve was cut.
In 3 cases both nerves were cut.
In 3 cases the infra-orbital only.
In 6 cases the inferior dental only.

In every instance the pain ceased immediately after operation. But in some it returned after a longer or shorter interval. All patients were immensely benefitted, some were entirely cured. In others final success had not yet occurred.

Dr. Hodgen's paper was discussed by Dr. J. R. Wood, of New York, Dr. Pancoast, Dr. Gross and Dr. Hart, of Philadelphia, and Dr. Campbell, of Georgia.

Dr. Chas. F. Stillman, of Plainfield, N. J., read a paper on Some Newly Devised Orthopedic Appliances, Including the Sector Splint.

He first spoke of some appliances for the more common abnormalities of the foot, and showed a brace, devised by himself, explaining the method and rationale of its application. Weak ankles were next considered, and a brace shown which fulfilled all the therapeutic requirements. The points for which he claimed originality and excellence were: 1, placing the hinge-joint at the back of the heel; 2, making the brace and shoe distinct. Then followed the subject of inverted feet, which in its more advanced stages constituted the various types of talipes varus. Talipes equinus was also discussed, and a bracket, devised by Dr. Stillman, shown. He also spoke of talipes valgus, and showed his brace for this affection.

The sector splint was fully explained, and its various advantages set forth. This part of the paper was, however, not read to the end, owing to the lateness of the hour.

Dr. Pancoast, of Philadelphia, read as the title of his paper, "Certain Methods in Surgery, and Considerations of the Etiology of and Pathology of White Swelling or Synovitis of Joints in Regard to the Practice of Extension in Treatment, and then spoke on various subjects more or less associated therewith. He first showed samples of black silk for sutures, which he preferred to the ordinary white silk, because the latter commonly contained impurities from lead salts. He then described his method of operating for varicocele, in which he employed a zinc button, and exerted great force in the tying of

the ligatures. Here also he used strong black silk. Forty cases of amputation at the metacarpo-phalangeal articulation were then instanced. In these he had, contrary to the method commonly in vogue, employed a volar flap. The success had invariably proved gratifying.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Albert H. Smith, M. D., Philadelphia, Pa., Chairman.

Robert Battey, M. D., Rome, Ga., Secretary.

In the absence of Dr. Smith, in Europe, on account of ill-health, Dr. J. M. B. Maughs, of St. Louis, was called to the Chair.

Dr. J. Marion Sims, of New York, read a paper on Battey's Operation in Epileptoid Affections.

Battey's operation, he said, like all innovations had had to fight its way; but he had no doubt, from the favor it had already received, both in this country and in Europe, that the time would arrive when it would be recognized as a legitimate operation. He had performed it eleven times; the first four cases occurring before he adopted the antiseptic method, and the last four operations being performed with full antiseptic precautions. As Listerism had rendered the operation of ovariotomy one of the safest in the whole domain of surgery, he saw no reason why it should not do the same for Battey's operation. On this occasion he desired to report the last four cases upon which he had operated. Three of these were cases of epileptoid convulsions associated with the menstrual molimen, and the other was one of hystero-epilepsy of a peculiar and unique character.

Dr. M. A. Pallen, of New York, followed Dr. Sims in a paper entitled, "On the True Import of Oophorectomy, or Spraying for Reflex Disease more Particularly in Epilepsy, Hystero-Epilepsy, or Catalepsy." These two papers were ably discussed by Dr. Robert Battey, of Ga.; Dr. Trenholme, of Montreal; Dr. Marcy, of Mass.; Dr. Findlay, of Pa.; Dr. Parsons, of Detroit, and Dr. Thomas of New York.

SECTION OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

Dr. Lawrence Turnbull, of Philadelphia, Chairman.

Dr. Eugene Smith, of Detroit, Secretary.

In the absence of Dr. Bolling A. Pope, of New Orleans, Dr. Lawrence Turnbull, of Philadelphia, was made Temporary Chairman.

The session was called to order by the Chairman, and the first paper of the afternoon was read by Dr. W. H. Daly, of Pittsburg, Pa., on A Case of Syphilitic Stenosis of the Larynx with Fibrous Adhesive Bands of the True Vocal Cords; Tracheotomy, Rupture of Bands, and Cure of the Stenosis by General and Local Treatment.

Dr. Carl Seiler, of Philadelphia, read a paper entitled "Remarks on the Lesions of the Larynx in Pulmonary Phthisis."

WEDNESDAY, JUNE 2ND.—SECOND DAY.

The Association was called to order at 10, A. M., by the President.

On motion the following gentlemen were elected honorary members: Mr. Jonathan Hutchinson, London, England; Drs. Hingston, Osler, David, Howard and Trenholme, of Montreal; Dr. G. B. Ercolania, Bologna, Italy; Dr. Emile L. DeMola No, Lima, Peru; Dr. Dillon, of Dublin; Dr. Rosenbergh, of Hamilton, Canada; and Dr. Clark, of Toronto.

Dr. A. L. Gihon brought up the question of representation from the U. S. Navy, and spoke against the action of the Association at its last session.

Upon motion made by Dr. S. D. Gross, the U. S. Navy was at once admitted to full recognition by the Association.

The Committee on Nominations, consisting of one delegate from each State, was next announced.

A number of gentlemen were elected members by invitation.

The report of the Committee on Ozone was announced by a letter from Dr. N. S. Davis, of Chicago, asking for an appropriation of $200 to be expended for instruments, and on motion this Committee was continued.

Dr. J. S. Lynch, of Baltimore, Chairman of the Section on the Practice of Medicine, then delivered his address, in which he congratulated the profession upon the fact that the general health of the country during the last year had been so exceptionally good, and then turned his attention to the subject of yellow fever. He regarded it as settled that the germs of that disease cannot be destroyed by cold, and reviewed the history of the ship Plymouth as bearing upon that question.

Another peculiarity of the poison was that when first emitted from the subject, it was not in an active or potential condition, but subsequently developed so as to render it capable of imparting the disease; therefore a miasmatic-contagious affection.

A review of several observations was given in substantiation of that doctrine. The doctrine being true, there was an abundance of time to destroy the germs before they could communicate the disease; hence, all danger could be absolutely prevented.

Dr. Lynch then passed to the consideration of the great mortality from consumption, scarlet fever, and diphtheria, and the means to be adopted to reduce such rate. Scarlet fever and diphtheria were preventible diseases, and consumption could be markedly checked in its ravages by means of proper sanitary and hygienic measures.

The next topic was antipyretic treatment, as applied by means of the cinchona alkaloids, salicylic acid, carbolic acid and aconite.

The Chairman then made a brief allusion to what had been accomplished by the aid of the thermometer, the ophthalmoscope, the microscope, and the hypodermic syringe, and closed with an eloquent reference to the present position occupied by the science and art of medicine.

Dr. Wm. T. Briggs, of Nashville, Tenn., then delivered his address as Chairman of the Section on Surgery and Anatomy.

This address was received with marked attention, and upon motion, with Dr. Lynch's address, was referred to the Committee on Publication.

Communications were then read and received their proper reference, after which the Association adopted the following amendment relating to prize essays and the committee on prize essays.

a. There shall be four annual prizes of two hundred and fifty dollars each, which shall be awarded at the close of the second year after announcement, as hereinafter explained, for strictly original contributions to medical and surgical progress.

b. It shall be the duty of the Chairman of each of the following four Sections: 1. Practical Medicine, Materia Medica, and Physiology; 2. Obstetrics and Diseases of Women and Children; 3. Surgery and Anatomy; 4. State Medicine and Public Hygiene, to appoint annually, before the adjournment of the meeting of the Association, three members of ability and good judgment who shall constitute a Committee of Section, and who shall, within thirty days thereafter, elect and publicly announce for competitive investigation and reportt, a subject belonging to one or other of the branches of medicine included in the title of the Section.

c. It shall also be the duty of the Chairman of each of the Sections mentioned to appoint annually a Committee of Award, consisting of three experts, who shall carefully examine the essays offered for competition, and if any one shall be found worthy of the prize as a substantial contribution to medical knowledge, to recommend the same to the Association.

d. All essays placed by their authors for competition shall be in the hands of the Chairman of the respective Committees of Award on or before the first of January preceding the meeting of the Association at which the reports of the committee are required to be made.

e. All Prize Essays are considered as the property of the Association.

f. The names of the authors of the competing essays shall be kept secret from the committees by such means as the latter may provide.

g. Membership in either of the two committees shall not debar from membership in the other; nor shall membership in the Committee of Selection exclude a member from the privilege of offering a competitive essay.

The Association then adjourned to meet at 10 A. M., Thursday, June 3d, and the Metric System was made one of the orders of the morning session.

SECTION ON THE PRACTICE OF MEDICINE—met at the appointed hour. The first paper read before this Section was On Sphygmograms, with Notes of Autopsies by Dr. H. R. Hopkins, of Buffalo, N. Y. The next paper was by Dr. R. W. Taylor, of New York, "On the use of Chrysophanic Acid in the Treatment of Skin Diseases."

Dr. J. S. Cohen, of Philadelphia, read a paper by title, for Dr. W. T. Gadbury, Miss., on "Artificial Inflation as a Remedial Agent in Diseases of the Lungs."

Dr. Wm. Pepper, of Philadelphia, next read a paper entitled "Further Contributions to the Local Treatment of Pulmonary Cavities." Dr. Pepper's paper was discussed by Dr. Bennett, of Ohio; Dr. Whitney, of New York; Dr. Cutter, of Boston; Dr. Russel, of Mass. and Dr. Wilson, of Ohio.

A paper on "The Treatment of Scrofulous Diseases of the Skin," was read in abstract by Dr. J. V. Shoemaker, of Philadelphia.

A paper was read by Dr. J. R. Ulher, of Baltimore, On Restorative Remedies.

Dr. Ulher described a very simple method of determining the amount of nitrogen (and urea) in urine. It consists in taking two bottles, one of which just fits into the other. The smaller bottle is attached by a wire to the cork of the larger one. Into the small bottle is placed urine; in the larger a mixture of liquor sodæ chlorinat, and common salt. The two bottles, one within the other, are first carefully weighed; they are then shaken, and their contents mixed together. A decomposition follows, which results in the evolution of nitrogen. This gas is allowed to pass off, and the bottles with their contents are again weighed. The difference between the first weight and the second shows the weight of the nitrogen, from which may be calculated the weight of the urea.

Dr. Ulher then passed to the subject of foods, and referred to the recent experiments of Dr. Roberts on digestive ferments, in which he had stated that milk and oysters were the only two foods that should not be eaten cooked. The oyster, he said, was a food which digested itself when taken raw.

Dr. Ulher had devised a new process by which he hoped the pepsin could be kept active in powder form. He covered the fresh moist stomach over with gypsum. When this hardened, he pulled it off and ground up the saturated plaster. This he had found was very active, and kept very well.

In conclusion, the uses of iron and digitalis were described. A description of the theory of the action of the heart, and of digitalis upon it was given and illustrated with diagrams.

SECTION ON SURGERY AND ANATOMY, was called to order by the Chairman, Dr. Briggs, of Nashville.

The discussion on Dr. Pancoast's paper, read first day, was continued by Dr. Martin, of Mass., Drs. Smith and Nancrede, of Philadelphia, Dr. A. C. Post, of New York, Dr. Hinton, of Canada, and Dr. Campbell, of Vermont.

Dr. Jas. L. Little, of New York, read a paper On Compound Complicated Harelip, which was discussed by Drs. Atlee, Post, Vanderveer, Westmoreland, Sayre, McGuire, Hamilton and Goodwillie.

Dr. Jos. C. Hutchinson, of Brooklyn, read by title a paper on A New Ether-inhaler, and a New Form of Transfusior Apparatus.

A paper on Hip-Joint Disease was read by Dr. Willard of Philadelphia.

Dr. John B. Roberts of Philadelphia, read a paper On Tapping of the Pericardial Sac.

The operation, it was said, was proposed over two hundred years ago. The pathology, symptoms, and treatment now in vogue were alluded to. The fifth intercostal space about 5 cent. to the left of the median line, was considered to be the best place for the procedure of tapping. Large serous effusions gave the most brilliant results. The operation might be repeated if necessary. The canula could be left *in situ*, and the sac washed out with antiseptic solutions. Forty-two cases were mentioned, with fourteen recoveries and twenty-eight deaths.

Paracentesis of the pericardium would in future have to be performed at an early period than heretofore.

Cystotomy for Cystitis in the Male. Dr. Robert F. Weir, of New York, read a paper upon the above subject, which embodied the results of forty-seven cases, in which the operation of cystotomy for cystitis had been resorted to.

Dr. L. Turnbull, of Philadelphia, read a paper On Skin Grafting, with Illustrative cases. Photographs were also passed around for inspection.

A paper, by Dr. D. M. Barr, of Philadelphia, on A New Inhaler, was read by title only.

Dr. W. A. Byrd, of Quincy, Ill., then read his paper on Laparotomy and Colotomy, with Formation of Artificial Anus for Intestinal Obstruction.

THE SECTION ON OBSTETRICS AND DISEASES OF WOMEN—Met in regular session, Dr. Maughs in the Chair.

The first paper was read by Dr. J. Taber Johnson, of Washington, D. C., on the "Management of the Third Stage of Abortion, Retention of Placenta and Membranes."

This paper elicited an animated discussion, in which Dr. Sherman, of St. Lawrence; Dr. Christian, of Texas; Dr. Weeks, of Mass.; Dr. Erich and Dr. Morris, of Baltimore; Drs. Hubbard and Hanks, of New York, and Dr. Trenholme, of Montreal, took part.

The next paper was read by Dr. Isaac E. Taylor, of New

York, entitled "Gastro-Hysterotomy; Being Remarks on and Exhibition of a Full-Term Uterus, Removed by Laparotomy."

Dr. Marcy, of Mass., exhibited a New Uterine Dilator, which operated by gradulated elastic tension, and could also be employed by means of a special attachment for restoring the inverted uterus.

Dr. T. Gaillard Thomas, of New York, then read a paper entitled, "Clinical Contributions to the Subject of Removal of the Uterus, in Whole or in Part, by the Extirpation of Tumors Connected with that Organ."

There were three circumstances, he said, under which complete extirpation of the uterus might now be regarded as a legitimate, and often a very necessary procedure. 1. On account of malignant disease. 2. As an addendum to the Cæsarian section, after the method of Porro, and, 3, in order to render practicable the removal of tumors which took their origin in its tissues, or which arose in the ovaries, and which attachments were too firm to be broken.

It was with the third class of these indications that the present paper was concerned. After quoting the opinion of Barnes, Emmet, and other authorities, who regard such operations as still *subjudice*, he stated that he was to-day giving evidence in favor of a young and feeble cause. An honest conservatism was the bulwark of scientific surgery; but, at the same time, there was no virtue so likely to run to dangerous extremes. In this connection, he alluded to the splendid triumphs of ovariotomy within the last few years, and said that it was with the desire to put upon record further testimony from which might be drawn reliable deductions as to the propriety of removing solid or cystic tumors by laparotomy, when such removal involved the necessity of ablation of the uterus, that this clinical condition was made.

Section on Diseases of Children.—This section was organized by the election of Dr. S. C. Busey, of Washington, as Chairman. This section owned its existence to the Committee of Arrangements. At this meeting a motion was made to recommend the Association to adopt such an amendment to the constitution as would create a Section on Diseases of Children.

The Section on Medical Jurisprudence, Etc.,—was presided over by Dr. J. F. Hubbard, of Indiana, Chairman.

The first paper before this section was by Dr. C. R. Drysdale, of London, England, on the Death Rate of the Rich and Poor. In the absence of the author this paper was read by the Secretary.

The next paper was by Dr. J. S. Billings on the National Health Board. Dr. E. H. Parker, of Poukeepsie read a paper entitled the Relations of the Medical and Legal Professions to Criminal Abortion.

Unsanitary Engineering and Architecture was the title of a

paper read by Dr. A. N. Bell. The second day's session of this Section was well taken up in reading papers, and in debates upon the same. Among the papers offered was one by Dr. A. L. Carroll, of New Brighton, N. Y., on the Personal Factor in the Etiology of Preventible Diseases. Dr. Carroll said there were two factors to be considered in all preventible diseases, viz: the exciting causes, or predisposing influences, and the susceptibility of the patient. There was a marked proclivity of some persons to being affected with certain diseases, when others exposed to the contagion would remain free from the malady. Examples of such were given. A third factor often exists, formerly spoken of as the "epidemic constituent of the atmosphere," when there was increased tendency to the reception of contagion. This is seen when persons escape from attacks of disease, at one time, and are attacked at another season, when the system is more susceptible to the effects of the poison.

The following officers were elected for next year:

For President—John T. Hodgen, M. D., of St. Louis, Mo.

For Vice-President—1st, W. H. Anderson, M. D., of Mobile, Ala. 2d, Levi G. Hill, of New Hampshire. 3d, Henry T. Holton, of Vermont. 4th, H. Carpenter of Oregon.

For Permanent Secretary—W. B. Atkinson, M. D., of Philadelphia, Pa.

For Treasurer—R. Dunglinson, M. D., of Philadelphia, Pa.

For Librarian—William Lee, M. D., Washington, D. C.

For Chairman of the Section on Practice of Medicine, Materia Medica and Physiology—Dr. Charles Denison, of Colorado.

For Secretary—Dr. T. A. Ashby, of Maryland.

For Chairman of the Section on Surgery and Anatomy—Dr. H. McGuire, of Richmond, Va.

For Secretary—Dr. D. A. Eve, of Tennessee.

For Chairman of the Section on Obstetrics and Diseases of Women—Dr. James R. Chadwick, of Boston, Mass.

For Secretary—Dr. J. Taber Johnson, of Washington, D. C.

For Chairman of the Section on Medical Jurisprudence and State Medicine—Dr. J. T. Reeve, of Wisconsin.

For Secretary—Dr. R. G. Young, of Arkansas.

For Chairman of the Section on Ophthalmology, Otology and Laryngology—Dr. D. S. Reynolds, of Kentucky.

For Secretary—Dr. S. M. Burnett, of Washington, D. C.

For Members of the Judicial Council to fill vacancies—Drs. J. K. Bartlett, of Wisconsin; F. Staples, of Minnesota; D. R. Wallace, of Texas; J. S. Billings, of U. S. Army; J. H. Warren, of Massachusetts, and A. T. Woodward, of Vermont.

The Committee recommended that the next meeting of the Association be held in the City of Richmond, Va., on the first Tuesday in May, 1881.

As Chairman of the Committee of Arrangements—Dr. F. D. Cunningham, of Richmond, Va.—*Maryland Medical Journal.*

Reviews and Book Notices.

A System of Medicine. Edited by J. Russell Reynolds, M. D., F. R. S., etc., etc. With numerous additions and illustrations, by Henry Hartshorne, A. M., M. D., etc., etc., in three volumes. Philadelphia: Henry C. Lee. 1879.

This is the latest and certainly one of the very best books on general practice, which has ever been offered to our profession. The first volume treats of general diseases and diseases of the nervous system.

The practitioner who desires to be quite *au courant* with the most advanced of his profession, may reasonably object that so little of that portion of the work which treats of general diseases, should be given to the consideration of the germ theory of diseases. Perhaps it is better for those who desire to prosecute a thorough study of the origin and spread of diseases from specific germs to have recourse to the valuable monographs confined entirely to this subject.

The papers upon the various general diseases are contributed by some of the leading medical men of Great Britain. The article on diphtheria, by William Squire, is a plain and practical account of the disease in respect to its etiological, symptomatic and pathological characteristics and the most proper methods of treatment. The papers on scarlet fever, small-pox, vaccination and typhoid fever are by Doctors Gee, Marson, Seaton and Harley respectively. The latter is a believer in the spontaneous origin of the typhoid-fever contagion from putrescent matter, but admits its communicability from the sick to the well.

The article on constitutional syphilis, by Jonathan Hutchinson, and those on gout and rheumatism are by Dr. Gârrod.

The names of Hughlings Jackson, Radcliffe and Begbie are among the leading contributors to diseases of the nervous system comprised in the first volume of the series.

The second volume is devoted entirely to the study of diseases of the respiratory system and of the organs of circulation. Pneumonia, bronchitis and cardiac diseases are given that degree of attention and amount of space their relative importance demands.

The third volume is devoted to diseases of the digestive, blood-glandular, urinary, reproductive and cutaneous systems.

This system of practice can be earnestly recommended to the general practitioner, being adapted to his wants as a standard reference book of practice. It may be ordered on advantageous terms from Armand Hawkins, medical bookseller, 196½ Canal street.

A Manual of Auscultation and Percussion; embracing the Physical Diagnosis of Disease of the Lungs and Heart, and of Thoracic Aneurisms. By Austin Flint, M. D., Professor of the Principles and Practice of Medicine, and of Clinical Medicine in the Bellevue Hospital Medical College, etc., etc. Second Edition—Revised. In one handsome royal 12 mo. volume, cloth. Price, $1 75. Philadelphia: Henry C. Lea. 1880. [Sold by Armand Hawkins, 196½ Canal street, New Orleans.]

This work is a resumé of a large experience gathered through long years of hard study and practical instructions. The name of the author (Austin Flint) is a sufficient guarantee of the competent manner in which the subject has been treated.

Its usefulness to every student engaged in the practical study of auscultation and percussion, and also to every practitioner as a hand-book cannot be over-estimated. P. B. McC.

Common Mind Troubles and the Search of a Clear Head. By J. Mortimer Granville, M. D., F. R. C. S., etc.

Dr. Granville has offered to the general reading public a book that will be highly valued. While it is scientific, its clearness of style and freedom from technicalities makes it readable by all. The two chapters alone on Habit and on Consistency, if carefully read and digested, will furnish a most serviceable guide for self direction, and the whole book puts its readers in a position to be self-helpers.

Though addressed to the public this book contains no prescriptions, it presents no dangers that are found in family medical books. Our author divides failings into moral, mental and physical, but adds that what generally appears to the observer as a failing, is a combination of errors in feeling, thought and action. He therefore insists on the ability of the will to correct most of these errors if its authority is early

exerted. In his chapter on Defects of Memory, his remarks in regard to our modern way of cramming boys for competitive examinations are very just. It would be well if physicians would more generally direct their attention to the prevention of the evils which parents allow teachers to inflict upon the young in their charge. ELBE.

Pathogenetic Outlines of Homœopathic Drugs. By Dr. Med. Carl Heinigke, of Leipzig. Translated from the German by Emil Tietze, M. D., of Philadelphia. 8vo. Pp. 577. Boericke & Tafel: New York and Philadelphia. 1880.

This work consists of an alphabetical list of drugs, exhibiting their specific homœopathic effects upon the healthy system, together with their therapeutic applications. About nine-tenths of the space is occupied with a detail of the physiological symptoms, and it seems to us superfluous to devote any space at all to the therapeutics of the drugs, as they are necessarily applicable for precisely the same symptoms which they produce.

The effects of remedies are classified under the following heads: Generalities; Skin, Subcutaneous Tissue and Musculature *(sic)*; Nervous System, including the Brain, Organs of Sight, of Hearing, of Smell, and Special Nerves; Organs of Circulation; Organs of Respiration; Organs of Digestion; Urinary and Sexual Organs. When it is considered that every remedy produces numerons specific effects under all these several heads, the astonishing resources of the homœopathic materia medica can be imagined, if not appreciated. Inspection of these innumerable symptoms discovers a remarkable similarity in the effects of a great variety of drugs, and the irreligious philosopher would probably be unable to determine precisely how much of all this detail has been written off-hand from the inner consciousness; and again, how much a vigorous imagination has contributed in the production of such an immense mass of subjective observations.

There is undoubtedly a great advantage in this multiplicity of symptoms produced by drugs and in their striking similarity, for the selection of a remedy for any symptom is a matter of extreme simplicity: indeed, there can scarcely be any room for

choice between remedies, as almost every one is sure to fit any symptom.

On a previous occasion in these pages we expressed the opinion that homœopathy is a religion, and now at the risk of apparent irreverence we venture to ask an explanation in a matter which touches faith, and probably ought not to be questioned. It is undoubtedly true that the water of the Mississippi river, and indeed most potable waters, contain proportions of the calcium salts similar to the higher potencies of these chemicals, when homœopathically prepared, and which are credited with astonishing results in the "provings." Now, the question which agitates our mind is, how mankind manage to tolerate the continual ingestion of powerful medicinal agents, without exhibiting some of the specific effects ascribed to them.

Moreover the atmosphere must be constantly charged with homœopathic potencies, in various degrees, of every substance in nature; for we read in a foot-note on p. 186, "*Evaporation* is a *general* peculiarity of matter. The rays sent forth from the surface of a body, by undulation of ether, are simultaneously accompanied by an emission of metallic particles in the direction of the rays." It is rather remarkable that a "peculiarity" should be "general," but we presume it is one of the mysteries of the homœopathic system, to be taken in along with the doctrine of the "emission of metallic particles in the direction of the rays," by the exhibition of faith *pro re nata*.

It is obviously impossible to harmonize homœopathy with the commonly accepted laws that govern matter, and we are impressed with the importance of organizing it into a religious system.

The occasion at present is most propitious, owing to widespread dissatisfaction with antiquated creeds and a craving for novelty. It might readily be discovered that its founder, Hahnemann, received it in dreams by divine revelation, and the whole story might be written out, as the book of Mormon was about fifty years ago. A new apostle might elevate the mysterious "triturations" and "percussions" into sacraments; a creed might be formulated for adults and a catechism for children; the new gospel would prove extremely edi-

fying to devout souls and especially captivating to the female half of mankind; by an easy transition, the Homœopathic Medical Schools would become Theological Seminaries, and the title of M. D. naturally shift to the more fascinating D. D.; finally the pellets and mother tinctures should be used rather as prophylactics than remedies, as being more conducive to the cultivation of a wholesome faith. Then the supervention of sickness would be understood as a specific retribution for sin, with none of the uncertainty that belongs to the hereafter. The exhibition of the sacred drugs should therefore be systematised for daily household use, and might appropriately take the place of family prayers and grace at meals, with the obvious advantage that everyone would actively participate in the devotions.

What a magnificent field for the operation of an ambitious and commanding intellect is here presented! The head of a new church, swaying the passions, holding the consciences and the purse-strings of millions! Here is the opportunity, but where is the man?

Books and Pamphlets Received.

The Pharmacopœia of the British Hospital for Diseases of the Skin. By Balmanno Squire, M. D., London.

On the Diagnosis of Fractures and Dislocations, with a View to the Establishment of Pathognomonic Principles. By L. A. Dugas, M. D., LL.D., Prof. of Surgery in the Medical College of Georgia.

A Contribution to the Pathology of the Cicatrices of Pregnancy. By Samuel C. Busey, M. D., Prof. of the Theory and Practice of Medicine, Medical Department University of Georgetown, etc.

The Bromide of Ethyl as an Anæsthetic. By J. Marion Sims, M. D., LL. D. Read before the New York Academy of Medicine, March 18, 1880.

Catalogue of the College of Physicians and Surgeons, Baltimore, Md.

On the Relations of the Medical Profession to the Trade Interests of the Materia Medica and a Note on Pepsin. By Edward R. Squibb, M. D., Brooklyn, N. Y.

On Fluid Extracts as proposed for the coming Pharmacopœia. Reprint from Therapeutic Gazette, April 15th, 1880.

Report of the Special Committee of the Common Council of the city of Albany, on the Affairs of the Albany Medical College and the Removal of Dr. John Swinburne.

Ovarian Tumors—At what Stage of the Disease is it the Proper Time to Operate? By Edward Bork, M. D., Member of the Medical and Chirurgical Faculty of Maryland and Baltimore Medical Association, etc., etc.

The Prospective Advantages of Baltimore as a Medical Centre. By John Van Bibber, M. D. Reprint from Maryland Medical Journal, April, 1880.

Kolpo-Cystotomy by Electro Cautery with Remarks on the Method of Operating. By John Byrne, M. D., M. R. C. S. E., Surgeon in Chief to St. Mary's Hospital for Diseases of Women, Brooklyn, etc., etc.

A Case of Intrauterine Ichthyosis. By Wm. R. Smith, Sr., M. D., Cairo, Ills. Reprint from the American Journal of Obstetrics, April, 1880.

Time of Conception and Duration of Pregnancy. By George J. Englemann, M. D. Reprint from St. Louis Courier of Medicine, May, 1880.

Contributions to Gynecology, etc. By John Byrne, M. D., M. R. C. S. E., Surgeon in Chief to St. Mary's Hospital for Diseases of Women, Brooklyn, N. Y., etc., etc. Reprint from the Annals of the Anatomical and Surgical Society, Brooklyn. Vol. II, 1880.

Clinical Notes on the Elongations of the Cervix Uteri. By William Goodell, A. M., M. D., Philadelphia. Reprint from volume IV, Gynecological Transactions, 1880,

Meteorological Summary—May.
Station—New Orleans.

Date.	Daily Mean Barometer	Daily Mean Temp'ture.	Daily Mean Humidity.	Prevailing Direction of Wind.	Daily Rain-fall.
1	30.239	67.2	52	N. E.	
2	30.072	65.5	75	N. E.	.21
3	30.005	71.0	76	North	....
4	29.999	71.7	76	East.	..
5	29·993	75.5	75	East.	....
6	30.008	74.7	74	East	..
7	30.002	75.7	75	S. E.	....
8	29.931	75.5	75	East.	.17
9	29.907	77.0	74	East.	....
10	29.996	79.2	75	S. E.	....
11	30.022	79.2	73	East.	....
12	29.952	77.5	70	East.	....
13	29.832	73.7	75	East.	.24
14	29.898	76.5	69	N. E.	.02
15	30.094	74.5	72	East.	.01
16	30.217	73.0	64	East.	....
17	30.148	72.7	67	East.	....
18	30.052	74.7	69	East.	....
19	29.995	76.5	68	East.	....
20	29.886	73.5	88	S. E.	.93
21	29.883	79.0	78	South	.11
22	29.969	80.2	74	S. E.	....
23	29.999	79.7	77	S. E.	....
24	29·995	78.5	77	S. E.	.03
25	29.974	73.2	87	S. E.	.75
26	29.954	73 2	88	East.	1.13
27	29.917	76.0	86	S .E.	2.06
28	29.905	78.2	82	South	.39
29	29.909	79.2	82	S. E.	.45
30	29.979	81 0	76	South	.05
31	30.027	81.7	72	S. E.	....
Sums					
Means	29.992	76.6	75	East.	6.58

General Items.

Mean Bar. 29.992.
Highest Barometer, 30.368.
Lowest Barometer, 29.791.
Monthly Range of Barometer, 0.517.
Highest Temperature, 88° on 31st.
Lowest Temperature, 58° on 1st.
Greatest Daily Range of Temperature, 16° on 10th.
Least Daily Range of Temp., 4° on 15th.
Mean of Maximum Temperatures, 81°3.
Mean of Minimum Temperatures, 69°6.
Mean Daily Range of Temp., 11°7.
Prevailing Direction of Wind, East.
Total Movement of Wind, 6,304 miles.
Highest Velocity of Wind and Direction, 36 miles, East.
Number of Clear Days, 6.
Number of Fair Days, 17.
Number of Cloudy days on which no Rain fell, 8.
Number of Cloudy Days on which Rain fell, 0. Total number of days on which rain fell, 14.
Dates of Luna Halos, 15th.

COMPARATIVE TEMPERATURE.

1871		1876	74°.7
1872		1877	73°.5
1873	73°.7	1878	75°.5
1874	70°.7	1879	76°.5
1875	76°.2	1880	

COMPARATIVE PRECIPITATION

1871	inches.	1876	7.10 inches
1872	"	1877	1.48 "
1873	18.68 "	1878	8.11 "
1874	10.22 "	1879	4.63 "
1875	2.53 "	1880	"

L. DUNNE,
Sergeant, Signal Corps, U. S. A.

Mortality in New Orleans from May 15th, 1880, to June 19th, inclusive.

Week Ending.	Yellow Fever.	Malarial Fever.	Consumption.	Small-pox	Pneumonia.	Total Mortality.
May 22	0	4	15	0	6	141
May 29	0	3	18	0	4	138
June 5	0	6	14	0	8	150
June 12	0	7	25	0	6	166
June 19	0	5	11	0	8	114
Total....	0	25	83	0	32	709

ERRATA

p. 108, line 16, for "by Drs." read *to Drs.*

p. 117, 6th line from bottom, for "The same have," read The same *has.*

p. 118, last line, for "dath," read *death.*

p. 120, 11th line from bottom, for "There can be acclimation," read There can be *no* acclimation.

p. 123, fourth line, for "geology," read *zoology.*

p. 123, 8th line, for "however, much," read however much.

p. 124, 15th line, for "variaus," read various.

NEW ORLEANS
MEDICAL AND SURGICAL JOURNAL.

AUGUST, 1880.

ORIGINAL COMMUNICATIONS.

Acclimatisation, or Acquisition of Immunity from Yellow Fever.

By STANFORD E. CHAILLÉ, M. D.,

Professor of Physiology and Pathological Anatomy, Medical Department, University Louisiana; Corresponding Member of the Academia de Ciencias Medicas, etc., Havana, Cuba.

The more frequent and intense the prevalence of yellow fever in a place, the firmer and more general is the conviction that the natives enjoy an immunity from the disease; hence, in Cuba, this conviction is specially well marked. Much evidence was there gathered by the writer on this subject, and, with the presentation of some of this evidence, effort will be made to correct some prevalent errors, and to gain a somewhat clearer insight into the causes of this alleged immunity. In the mean time, it is fully recognized that science does not yet possess sufficient premises to justify conclusions as absolute as are generally credited on some of the points involved, that farther investigations must be made to solve these, and that our present deficiences are chiefly due to our inability to diagnose yellow fever with certainty, especially the milder cases.

These two questions will be considered: do the natives of Cuba enjoy immunity from yellow fever; and if so, to what causes is any such immunity due?

Dr. J. R. de Armona, one of the many accomplished physicians of Cuba, wrote, Sept. 23d, 1879: "I disagree with my confréres

in Marianao or elsewhere, who believe they have seen yellow fever in native Cubans, much less in children. I believe all such cases to have been remittent bilious fever." This quotation will suffice as a representative example of present opinion in Cuba both in and out of the profession. None the less, it is believed that the following evidence will serve to prove that this prevailing opinion is entirely too absolute, and that only those Cubans, born and resident in places, where they are habitually subjected to the influence of the poison, enjoy, to any great extent this apparent immunity. The record of this evidence is the more important now, because if yellow fever should continue to increase in Cuba, the difficulty of establishing the truth will annually augment, for, the more frequent, violent and widespread the disease, the smaller the number will become of those who are susceptible.

Humboldt, writing in 1800-1804, says (p. 117, Thrasher's Humboldt): "The sea-shore has such an influence, that even the natives of the island who reside in the country, far from the coast, are subject to attacks of yellow fever when they visit Havana." While no doubt is entertained of the correctness of Humboldt's testimony as to the liability of Cubans living in the country, and the passage is cited solely as one proof of this in 1800, yet, Humboldt probably never wrote a sentence which contained a greater error than in attributing this immunity to the special influence of the sea-shore. This once wide spread error is still propagatad in some of our best text books, and therefore will justify a brief diversion from the topic in hand, to refute it. It is often associated with another error, viz: the combined influence of salt mixed with fresh water; and it has even been urged in other countries than Cuba, that this maritime influence can travel by winds to places far inland. However, in Cuba, it is impossible to get in any part thereof as far as 70 miles from the sea, while the general average width of the island is only about 53 miles.

The locality of maritime cities generally is, for reasons well understood, at the mouths of rivers. Ships frequent maritime cities, and if infected ships can transport yellow fever poison, then, there is no need of "a seashore influence," nor of "mixed

fresh and salt water," to explain why the poison is most frequently imported into, and thereby more frequently gets a foothold in maritime cities. Until the present century, ships were the most rapid travelling conveyances, and were especially superior to inland conveyances, as to the confined air and filth transported in their holds, and therefore, it is not strange that, until this century, the maritime tropical cities, most frequented by infected ships, were the places most frequented by yellow fever. Early in this century, steamboats were added to our travelling conveyances, and then for the first time, yellow fever began to manifest a greater inclination for inland towns, located on or adjacent to the banks of such streams as the Mississippi river, plied by steamboats from such infected centres as New Orleans. More recently, railroads have been built, leading from such cities as Vera Cruz and New Orleans; succeeding the opening of such roads yellow fever has repeatedly manifested the new inclination to visit inland places on these roads, very much farther from the sea-shore, from the banks of rivers, and from mixed fresh and salt water, than it is possible to get even in the unhabited mountain lands of the widest part of Cuba. These are facts, which no one, if familiar with no more than the history of yellow fever in the Mississippi Valley in 1878, can possiby dispute, however disputable may be their explanation.

While great maritime cities are more apt to become infected because of more numerous importations, it is now well known that yellow fever may ravage the most insignificant hamlet, even the scatered huts of a plantation. Hence the influence of the sea-shore should manifest its malignancy, not only in all such cities but also in less populous places So far is this from being true, that there are many indisputable facts to the contrary.

The Isle of Pines, Bahia Honda, Cabañas, Mariel, Zaza, and other preëminently maritime places in Cuba suffer little, if at all, with yellow fever. Heinemann and others report a number of places on the Mexican Coast, at the mouths of rivers, and located between Vera Cruz and places south thereof, which habitually suffer with yellow fever, and yet these intervening

places, though visited annually by the unacclimated foreign seamen of vessels, which do not touch at Vera Cruz or other infected place, have never yet suffered from yellow fever. The whole southern sea coast of the United States from Mexico to New York, can present innumerable settlements which have suffered either never or very rarely, though located between places which have repeatedly been attacked. Boudin's Med. Geog. asserts, with truth, that all notoriously fatal harbors have close by them, on the sea-shore, as well as inland, healthy places free from yellow fever. Finally, it is not to be forgotten, that in the eastern hemisphere there are a number of large tropical cities, such as Calcutta, Bangkok, Saigon, Canton and Borneo, not only on the sea-shore but also at the mouths of rivers; and that none the less, these have never yet been visited by yellow fever. Is it possible to credit, that although these cities are built on soil of the same geological character as in the western hemisphere, washed by the very same earth-encircling ocean, and warmed by the same sun, they owe their exemption from yellow fever to some incomprehensible difference between the Asiatic and American sea-shore, rather than to their distance from, and little communication with the American centres of infection? The poison of yellow fever is certainly much more sensitive to cold than is the poison of cholera, and if it be admitted, as seems certain, that the former is more difficult to transplant than the latter, then it becomes possible to understand why Asiatic maritime cities should not yet have suffered at all with yellow fever, while American sea-ports suffer comparatively little from cholera. Any other view leads to inexplicable mysteries. In fine, Cornillac is one of the few who correctly teaches, that, "sojourn on the sea coast does not render the European less apt, as has has pretended, to contract yellow fever." Nor does it, per se, render the Creole native less apt.

Returning from this digression, the evidence as to the liability of Cubans to yellow fever will now be resumed.

In 1822, Dr. José F. de Madrid, of Havana, wrote: "Fortunately the natives of the city, and the acclimated enjoy a

happy immunity. Only the rural inhabitants occasionally suffer with the fever."

In 1830, Dr. P. S. Townsend, of Havana, wrote: "So also, as is familiarly known at Havana, and other places, do those more robust and healthy natives of the interior of Cuba, when they come in the summer from their plantations, to visit or reside among their pale, languid and sickly brethren of the seaport, too often perish with the black vomit, under its most appalling form." (P. 325, N. Y. Med. Jour., 1830)

Peñuela wrote in 1855 (Topog. Med., p. 275): "The tradition of Holguin does not record the existence of any epidemic disease, and yellow fever has never manifested itself in this jurisdiction. However, at the beginning of the year 1851, according to Dr. Cañizares, a regiment arrived from Havana with the germs both of cholera and yellow fever, and these two epidemic diseases, at the same time, ravaged, not only the troops, but also *the natives of every sex, age and condition*, presenting the rare example of two epidemics appearing, coexisting, and terminating, exactly the same, and uniformly."

Drs. Elcid and Dumont reported in 1867 a yellow fever epidemic in 1865 at Recreo, on the railroad, about 14 miles southeast of Cardenas (pp. 89–103. V. 4, Anales). Dr. Elcid, who had had a long experience with yellow fever in the Military Hospital at Havana, and whose competency was indisputable, was an eye witness to this epidemic. These reporters testify that Creoles raised on plantations, and who visit Havana, Matanzas and Cardenas often contract yellow fellow fever and die; and that at Recreo in 1865, many native Cubans did die with unquestionable yellew fever. Of some of these, the names, decisive symptoms and other details are specified. All the physicians, pharmaceutists, and the entire population were unanimous in their belief that the disease was yellow fever. Drs. D. and E. state, that although the Cuban Superior Board of Health had denied the possibility of the existence of the yellow fever epidemic at Colon, as reported by its resident physicians, yet that this epidemic at Recreo conclusively disproved the position of the Sup. Board Health. "As during the epidemic at Colon, so we find at Recreo, the eternal diagnostic conflict between yel-

low and bilious remittent fever. Efforts are everywhere made to restrict the dominion of the former in favor of the latter. Fear and interested motives find their efforts successful at the expense of truth." "It is certainly true, that epidemics of yellow fever do occur in the interior of Cuba, which attack individuals there acclimated; it is also true that yellow fever in the interior of Cuba, and in the Antilles may attack the Creoles themselves; and it is further true, that a differential diagnosis between yellow and bilious remittent fever can, very certainly, not be made by the fact that a Creole is attacked, and therefore that yellow fever is excluded." In 1879, it was still common in Cuba for a physician, in presence of all the symptoms of yellow fever, to declare, if the patient were a Creole, that his disease was not and could not be yellow fever.

In 1874, Dr. R. H. Poggio, Med. Direct. Milit. Hospital, at Cadiz, a member of the Academy of Sciences at Havana, and formerly Med'l. Direct. of the Havana Milit. Hospital, wrote as follows (p. 59, Acclimation and Hygiene of Europeans in Cuba): "The want of sufficient data respecting the endemic diseases of Cuba has permitted the belief to exist, that the native Cubans enjoy an immunity from yellow fever. But, an attentive and unprejudiced obseration of the disease, during the recent years of war and disturbance has rendered very manifest the fact that Cubans, from their birth to an advanced period of life, and their descendants—inhabiting the interior of the island—are liable to yellow fever, when removing from such localities to others near the coast, and that the disease is as deadly among them as among Europeans. I have observed these facts not only near the sea, but in the interior of Cuba. In the jurisdiction of Bayamo, I have seen die with all the symptoms of yellow fever, not only the inhabitants of Guisa [about 15 miles southeast of the city of Bayamo], situated on an elevation, and reported to be one of the healthiest localities in the jurisdiction; but, also, negro slaves who served in the army. Like facts have been observed by many eminent physicians, who have practiced medicine in Cuba, and in other countries were yellow fever is endemic. In the archives of the Havana Academy of Sciences, a great mass of data are

collected to confirm the facts, that both white and colored do fall victims to yellow fever as well as to intermittent fevers, and are not naturalized or habituated to these, notwithstanding that they have been born in Cuba, and have been constantly subjected to its climatic influence." Dr. Poggio is unquestionably correct in stating that the facts observed during the insurrection, 1868–1878, when thousands of countrymen were forced to take refuge in infected sea coast towns, did serve to convince many that all Cubans were not exempt from yellow fever; but he is wrong in stating, that inhabitants of the interior had only to visit "localities near the coast" in order to be attacked, for, if uninfected localities on the very sea coast be visited, these are no more dangerous than any other uninfected localities. It is also quite certain that he goes too far in asserting that the class of Cubans who are liable to yellow fever, are just as liable as Europeans. He may be right, but neither he nor any one has yet gathered and presented proofs of this.

Dr. Pedro Imanes of Baracoa, officially reported to the Spanish Yellow Fever Commission, that in the epidemics at that place in 1876–8, an "exceptional feature was, that it attacked with special vigor and fatality native Cubans," not only natives of the town, but also of the adjacent country; and, that, "as is well known, native residents of the adjacent elevated country, are as liable as Europeans to the disease." Taken in connection with Dr. Imanes' further statement, that no epidemic had occurred for very many years prior to 1876, the "exceptional feature" reported by him, ceased to be at all exceptional; on the contrary, all yellow fever places illustrate as a general rule, that the longer the disease is absent the greater is the number of the natives attacked. In fact, this is a decisive test as to whether the poison has or has not been habitually present.

Dr. Lucas Gallerdo of Gibara, officially reported, August, 1879, in respect to this Cuban sea port: "I have attended numerous cases of yellow fever in residents of this town, who had never left it. Among these were some cases of children four years old and upwards. Every summer I have attended cases of yellow fever in natives of the adjacent country, who had never left their places of residence."

In 1879, official reports from resident physicians and Boards of Health in Remedios, Sancti Spiritus, Trinidad, and various places in Cuba, besides Baracoa, and Gibara united in testifying to the liability to yellow fever of native Cubans, residents of the country adjacent. Cardenas suffered with its worst epidemic of yellow fever in 1879, and in reference to it the Cronica Med. Quir. of Havana published, in September, 1879, this very significant sentence : " beside the ravages of the endemic, *bilious fevers have had victims, especially among children and youths.*"

While in Cuba, I gathered from eminent physicians, a number of cases of yellow fever in Cubans, not only born, but always residing in Cuba, so well described and authenticated, as to leave no doubt as to the true nature of the disease. It is deemed sufficient, as to these individual cases, simply to refer to Drs. Forns and Morado of Marianao, and by Drs. Zayas, del Valle and Burgess, of Havana.

But, in this connection, evidence of so much interest was presented, directly to the commission, by Drs. Reyes, Selsis, Navea and Mazarredo, that it deserves record. These gentlemen are all physicians of age, experience, distinction and superior education ; all, except perhaps Dr. Navea, are graduates of Paris.

Dr. Reyes writes: " Children have always been considered little liable to yellow fever intoxication. Some children from the interior coming to Havana may suffer, as such adults do, but if so, rarely." " I do not refuse to credit the occurrence of yellow fever in children, because, for the last two or three years, I have heard, particularly during the summer, of epidemics of an undefined hemorrhagic fever which has killed many children. Two years ago, many children thus died at Colon, Sagua and Cardeñas. I am the slower to form a conclusion in the matter, because accurate scientific observation here, especially in country places, is still in its cradle. This undefined fever has also existed in Havana this summer, 1879, for, there have occurred quite a number of deaths among children by a hemorrhagic fever." Dr. Reyes details one of these cases of a Cuban child 5 to 6 years old, and says that the death

in this case was attributed, "of course to the always prophetic bilious fever."

Dr. Selsis now of Havana, but long at Santiago de Cuba, writes: "Cubans born in and residents of the interior, especially of the cool and mountainous parts are liable to yellow fever." "I have never seen a case of yellow fever in any one born and living in Santiago de Cuba, but I have seen at Havana several cases of well marked yellow fever, in young subjects who had never left the city. Dr. Argumosa Jr., with Drs. Albertini and Redondo, in consultation, had one such case in a child 27 months old, who died with unquestionable yellow fever. This deserves the more attention because in an adjacent village, there has been for some time, the question as to the existence of a Cuban yellow fever."

Dr. Navea of San José de las Lajas, an inland town some 20 miles south-east of Havana, presented the following interesting report, after it had received the full approval of Drs. Cabrera and Bofill, his colleagues at San José: "We have here, annually, in the practice of the three physicians from 20 to 30 Cuban children, and from 30 to 40 Cuban adults attacked with bilious remittent fever, which is popularly designated Typhus. There is nothing whatever to constitute a differential diagnosis between this fever of the natives and the yellow fever of strangers. It is characterized by its hemorrhagic tendency, albuminuria, black vomit, and all the symptoms of yellow fever. It is so well marked, that even when seen by the uneducated, they exclaim "Vomito." The treatment for the one is the best for the other. We have never seen a second attack of this bilious remittent fever, nor one who had recovered from it attacked with yellow fever. If any one of us three physicians, here, see this fever attack a native Cuban, we say, "bilious remittent fever," and if it attack a person not a native of Cuba, we say "yellow fever;" but at bottom, it is the same disease; and we agree to call it bilious remittent fever in Cubans, solely because these believe themselves exempt from yellow fever, and are so prejudiced, that they would be alarmed, if assured, their disease was really yellow fever." Dr. Navea

further reports that this fever equally prevails at Jaruco, about 12 miles north-east of San José, and where he practised for 15 years.

Dr. Mantiguagi of Cienfuegos reported (Vol. 2, 1876, p. 63, of the Havana "Cornica Med. Quir.") as follows: "During December, 1875, the sanitary condition improved, but a certain fever has prevailed among children, which is known here as typhus, although it resembles in nothing the disease to which Europeans give this name, and which so often occurs in camps. By this fever, I have lost one patient, a child 8 years of age, born in this town. It presented all the symptoms of yellow fever, for, on the second day this patient had the characteristic vomit and stools, and died on the third day. In a consultation held with three other physicians, they agreed with me in my diagnosis, with this difference, that they said that these same symptoms which constituted yellow fever in strangers, constituted in natives the typhus. I have been told that 8 to 10 children have died of this disease."

Dr. Ramon de Mazarredo, a native of Cienfuegos, a graduate of the University of Pennsylvania, of Paris and of Havana, and one of the most experienced, reliable, and accomplished physicians of Cuba, presented to the commission a very valuable report, from which are taken the following extracts:

"Native born Cubans coming from a healthy district to one where yellow fever prevails are as liable to this endemic, as are unacclimated foreigners; while those that are born and remain a certain number of years in the infected region, are exempt from it."

Graduating in Paris in 1860, Dr. Mazarredo was familiar with and inclined to concur in the view of the immunity of children and natives, entertained by Bally, Hume, Faget, Cowley and other distinguished physicians. Notwithstanding this, the results of twenty years experience caused him to write in 1879, as follows: "In my own practice I have seen cases of yellow fever in children, from 1 to 5 years old, and even not over a year old, in whom it has been fatal, and I am now well convinced that children born in Cienfuegos are exactly in the same conditions the first years of their lives as are other new-comers,

and are just as liable to its attacks. Nevertheless, I consider that children are generally less prone to suffer severly, owing to their different conditions of living, enjoying in this respect the same privileges as the better class of foreigners, who suffer little.

"It is to be remarked also, that women suffer less than men, a result probably due to their greater seclusion. But in years when the disease is violent, as in 1868, 1870, 1876, the mortality is great in all classes, not even excepting children. In some of these the fever is mild, but in others so malignant that they have died from the 5th to the 6th day, after ejecting the characteristic coffee-ground vomit. I have also attended native children from the interior, as well as lads freshly arrived from Spain, and not above 10 years old, and I could not perceive any difference whatever in the symptoms, compared with those of yellow fever in the adult.

"Worthy practitioners of this locality give the name typhus fever to these cases, and although they admit, that no difference whatever exists between the symptoms, march, and duration of this, compared with yellow fever, still they think the former a swamp fever, and hence more amenable to quinine, which it is generally admitted does positive harm in yellow fever. However, although very heavy doses of quinine are given from the outset, these fail to check or even favorably influence the termination of this so called typhus. The less severe cases get well, but it is to be inferred that these naturally tend to recover, and do recover in spite of the medicine."

"I hope that I have made it clearly understood, that I am thoroughly convinced that yellow fever attacks native born children of, as well as all new-comers to, a locality where this disease reigns endemically; that all inhabitants of such localities have, in their time, had yellow fever once; and that, since this disease attacks but once in a life time, hence, for this sole reason, the acclimation or immunity thereby acquired is permanent, and never lost."

The views above quoted are those of a small, yet very intelligent minority of the physicians of Cuba, but the views of this minority are very much strengthened by the fact that they

are upheld by the majority of distinguished physicians in other yellow fever centres than Cuba. In proof of this, the following facts and quotations are presented:

Heinemann reports in 1879: "Until lately the physicians and people of Vera Cruz, supported with fanaticism the dogma that natives were absolutely exempt from yellow fever. But, the fearful epidemics of recent years [1875, 1877, 1878] have worked a change; for, so many native children and adults suffered, that the truth could no longer be denied, that these do not enjoy an absolute immunity."

From Rio Janerio, it is reported, that when yellow fever reappeared in 1849–1850, after more than a century's absence, the natives suffered severely, but not so severely as new comers; and Dr. Rey, of the French navy, reporting the epidemic of 1876, says that the natives were attacked, refers to medical authorities who concur in this, and quotes the mortality statistics which include some children under 10 years among the deaths by yellow fever. I have not been able to find any Brazilian authority contradicting such statements.

Turning to modern French literature, there will be found complete unanimity on this subject. Dutroulau, Cornillac, Féraud, Lota, De Lavison, Du Bellay and others, in fact, all who are known to me, unite in teaching the liability of the Creoles of the French Antilles and of Africa to yellow fever; that the immunity of both adults and children is relative, not absolute; and that this apparent immunity is well marked only among those Creoles born and resident in towns habitually infected. The following may be cited as one of many examples. Cornillac (1873, p. 242) says: At Martinique, in 1869, "the epidemic influence was very remarkable on white Creole children from 2–8 years old, that is on those born since the last epidemic [1857]. They were attacked suddenly without prodromes, with a very depressing access of fever, subsultus tendinum, convulsions, redness of face; and above all by repeated vomiting. The access terminated in 24 or 36 hours, and the child began to convalesce."

Mélier and Féraud incline to believe, while Lota, and De Lavison, of extensive experience in Martinique, strongly advo-

cate the view of Dr. Mazarredo, that all Creoles, either in childhood or subsequently, suffer from yellow fever, and gain their immunity by this method alone.

Blair, the unsurpassed clinical student and historian of the epidemic of British Guiana, 1851–4, states that the very first cases occured among little children, and that the attacks of others were numerous and repeated. "Infancy was one of the most favoring causes of the action of the yellow fever poison. The constitution of the new born or young white Creole was highly susceptible. He or she was truly in the category of new comers." In 1851, yellow fever had been absent from British Guiana for six years, since 1845.

In 1851, the medical profession of New Orleans was almost unanimous in teaching that those born in that city were not liable to yellow fever. Prof. Warren Stone, my teacher, was then one of the very few who taught that Creole children did have yellow fever, often in a form too mild to justify an absolute diagnosis. From 1853 to 1860, I was the associate of Dr. Armand Mercier, who was then, as now, an earnest advocate that the Creoles of New Orleans were exempt from yellow fever. Thus, my attention has been directed for many years to this subject, and I have lived to find that Prof. Stone's view has so triumphed, that there are now in New Orleans, no physicians known to me, having experience and distinction, except Drs. Mercier and Faget, who uphold the old view. That this change has been so complete, I attribute chiefly to the fact that until 1858, New Orleans was ravaged by almost biennial epidemics, while since 1858 there have been only two serious invasions, in 1867 and in 1878. The longer the intervals between epidemics, the larger necessarily must be the number af those who have failed to acquire immunity, and the more glaring becomes their liability to the disease. This is the explanation of the very old observation, that the longer the absence of an epidemic from a place the greater the susceptibility of its inhabitants.

It is believed that the facts now presented tend very strongly to the conclusion, although diagnostic deficiencies may render it impossible to prove it absolutely, that the Creole children as

well as adults of Cuba, as of other yellow fever regions, are liable to yellow fever; and that the extent of their apparent immunity is proportionate to the extent of their exposure to the poison of the disease. Wherever yellow fever occurs only occasionally as an epidemic, there the Creoles are manifestly liable to the disease; wherever it prevails habitually, there the Creoles appear to enjoy a very great, if not absolute immunity; and the fact that the white natives of any place do enjoy this comparative immunity is good evidence that the poison of yellow fever prevails habitually in this place. Hence, the important practical conclusion, that the stranger should beware, during the warm season, of every place in Cuba or elsewhere, of which the natives boast, that while the foreign born habitually, they never suffer with yellow fever.

It has already been intimated that authorities are generally too absolute in their assertions as to liability to and immunity from yellow fever. Because some or many may be liable, or the reverse, is not proof, as is generally implied, that all of the same class are in the same condition. In respect to the degree of liability it is important to draw attention to some other facts, besides those already stated, in order the better to consider the causation of immunity from yellow fever.

In infected places, are all foreign born whites, under apparently like conditions, equally liable to yellow fever? All authorities teach, that, in yellow fever as in other diseases, there are some few persons of such peculiar constitution that they are not liable; that women, sucklings, and the aged enjoy a comparative immunity; that those who come from cold northern latitudes or from high altitudes are more liable than those who have inhabited warm southern plains; that the robust and plethoric are more liable than the feeble and anemic; and that those engaged in occupations near the fire, bakers, blacksmiths, etc., are the most liable, while those occupied in pursuits which subject them to the inhalation of putrid air, scavengers, tanners, soap boilers, etc., are least liable. Notwithstanding this universal teaching, there is a great lack of reliable statistics, and of scientific proof, to establish what is thus taught; and there is much room to question whether the immu-

nity, so generally admitted, is not in large degree, apparent, rather than real.

Few students of modern researches into the nature of zymotic poisons will refuse to credit that the poison of yellow fever is particulate rather than gaseous. If so, then the escape of a few persons, during even the most violent epidemic, would not necessarily prove that their exemption was due to some incomprehensible idiosyncracy, any more than, the survival of one Spartan, out of the 300 at Thermopylae, proved that his peculiar idiosyncracy, exempted him from the slaughtering swords and spears of the Persians. Some veterans, with no lack of susceptibility to lead particles or bullets, have escaped unharmed, not from one alone, but from a hundred murderous battles. Manifestly, more knowledge than science now possesses must be acquired on this subject, before we should teach dogmatically. It is still more probable that the comparative immunity of women, of the aged, and perhaps of sucklings is, in some measure more apparent than real; due in the case of women largely to their more secluded lives, for, repeated instances have occurred, where theatrical companies have been exposed, and the female artists have suffered equally with the males; due, in the case of the aged, largely to the same cause, as well as to their very limited number in tropical countries and to an attack of this non recurring disease having been experienced in earlier years; due in the case of sucklings, probably also in large measure, to seclusion. As to the apparent immunity of sucklings, it is worthy of note, that this has also been observed, in typhoid, typhus, and scarlet fever, in cholera, influenza and croup; and further, that it is possible that diet may play a part in the matter, for, it seems certain, that this cause is potent in at least splenic fever, to which herbivora are very liable, omnivora less, and carnivora least. In respect to the somewhat greater liability of the robust and plethoric, and of the inhabitants of cold countries, there seems to be less reason to doubt that this is real; it is the common belief and numerous statistical tables, all however too regardless of the difference in surrounding conditions to be conclusive, tend to confirm this belief. The greater liability of

artisans working in hot places, and the comparative immunity of those exposed to foul emanations has been accepted on very loose evidence. The only statistical research on the subject, known to me, is recorded by Dr. Rey, in reference to the Rio Janeiro epidemic of 1876. This research proves that cooks, bakers, blacksmiths, are among those, who, on the contrary, are least liable; while the persons, very much the most liable, are those who, like cabmen, policemen and newspaper reporters, are engaged in ambulatory occupations, This result of statistical research is much more satisfactory than the accepted belief, for it is easily explicable, and in perfect accord with such facts as the comparative immunity of women and others leading sedentary and secluded lives. Seldom are all parts of a yellow fever battle field equally dangerous, and the chances of those forced to traverse daily all parts of it are much less favorable than are the chances of those confined to one small section of the field.

These facts, in respect to foreign born whites in infected places, tend to show that while some may enjoy comparative immunity from yellow fever, especially those from warm lowlands, who, it should be remembered are in considerable number malarious, feeble and anemic, yet, that some of the alleged causes of immunity are apparent, rather than real.

What degree of immunity is enjoyed by the colored races? Certainly a greater degree than by the whites. None the less, even the pure African negro is very far from enjoying an absolute immunity, and there are facts to prove that the causes of the comparative immunity of the colored races require the consideration of more than race differences.

Moufflet testifies, that the red indians of the warm low lands of Yucatan, are susceptible to yellow fever; numerous authorities unite in stating as the result of many years observation, that at Vera Cruz the pure blooded Indians from the cold highlands of Mexico, suffer from yellow fever even more than recently arrived Europeans; and Archibald Smith, cites numerous medical witnesses in proof that, in 1853--6, the Indians of the Peruvian Andes were destroyed in vast numbers, and to greater extent than the foreign born whites. In face of such

evidence, we are forced to suspect, that the comparative immunity of the Indian, usually observed in other places than Vera Cruz and the Andes, was due to other causes than the mere fact that he was an Indian. May it not be, that the Indians who do enjoy comparative immunity, are those only who, living in malarious lowlands, are feeble and anemic; while the hardy mountaineer is very susceptible? The great susceptibility, under certain circumstances, of the Indian of the present day, has served to confirm the conviction, I have long entertained, that yellow fever did not originate with the settlement of San Domingo by Columbus. Because unknown to Europeans, because undetected, among acclimated Indians, by ignorant adventurers, with no thought, except for conquest and for gold mines, is no proof that the disease did not exist, and had not existed from time immemorial. It has been proved, solely because of records such as Indians had not, that small-pox was known in China at least 1800 years before its first appearance in the 8th century in Europe: who would now contend that small-pox must have *originated* at some specified date in either Europe or China?

In Cuba, many physicians assert that the Chinese never suffer with yellow fever. This was found to be a great error, for a few days of investigation gathered authentic reports of more than a dozen cases. One of these reports was from the officers of the Garcini Infirmary, and to the effect that of about 90 Chinese specially noted, there had been 10 attacked and 3 deaths. As the importation ceased in 1874, every succeeding year has naturally rendered Cuban experience less valuable. But, apart from Cuban experience, the Chinese in others of the Antilles and in the United States, have proved beyond question their liability to yellow fever, and at the same time their comparative immunity.

The same have been proved by the English and French, in Guyana and the West Indies, in respect to Coolies from Hindostan and other parts of southern Asia. In regard to the comparative immunity of the Asiatic races, it should not be forgotten that the vast majority of these come from tropical malarious lowlands. This becomes all the more worth noting

when associated with the reported fact, that Hindoos from the lowlands, show far less susceptibility to cholera than Europeans, but that natives from the Hymalaya Mts. are just as susceptible as Europeans.

Similar facts as to negroes are recorded. In Cuba, many physicians assert that negroes enjoy an absolute immunity, but even if this were true, as it is not, in respect to all Cuban negroes, it would not be thereby proved that they owed their immunity to the sole fact, that they were negroes. There are numerous records, like the following: "In the terrible irruption of 1802, the African negroes, acting as nurses in the Hospital of Fort de France, Martinique, were attacked, and all died, except some old men,!" But the most remarkable well authenticated instance of this nature is in reference to the visitation, after many years absence, by the violent epidemic of 1830, of the little French Island of Gorée, some ninety miles from the west African coast. This epidemic not only attacked 144 out of 150 total European population, but is reported to have been equally destructive to the native Africans. Gorée is an arid volcanic rock, destitute of marshes, and very healthy; and therefore its native inhabitants were free from swamp poison, and probably hardy and robust. Is not the suspicion justifiable that the unusual susceptibility of the negro on this occasion was due to these causes? It is not strange, that this unusual susceptibility was not observed during succeeding epidemics, in as much as so large a number had suffered the one necessary attack during the first epidemic. But the comparative immunity of the negro, under apparently the same circumstances as the white man, has been proved repeatedly in the United States, and never more conciusively than in 1878. However, the statistics of U. S. white and colored soldiers at New Orleans, during the violent epidemic of 1867, present probably, the most trustworthy data in respect to the relative liability of whites and negroes. For every 1000 white soldiers, there were 866 cases yellow fever, and 256 deaths, or one death to every 3.9 soldiers, and to every 3.38 cases. While for every 1000 colored soldiers, there were 521 cases, and 73 deaths, or 1 dath to every 13.7 soldiers, and to every 7 cases. Now, while it

is true that the chances are great, that there were more colored soldiers from southern, malarial, yellow fever latitudes than white soldiers, yet this difference was probably insufficient to account for the above difference in susceptibility. These facts seem to prove that while the immunity of the negro has been much overrated, and this immunity attributed to race peculiarities without sufficient consideration of other conditions, yet that his comparative immunity from yellow fever, is a reality; as also is his less susceptibility to malarial fevers.

In searching to discover, how immunity from yellow fever may be acquired, it is necessary to bear in mind the facts now stated in order to avoid hasty and exclusive conclusions.

MODES BY WHICH IMMUNITY FROM YELLOW FEVER MAY BE ACQUIRED.

Consideration of this subject requires that all conceivable modes, whether possible, probable or certain, should be kept in mind. They may be summarized, and will be considered in the following order:

I. Acclimatisation, i. e., gradual habituation and accomodation to the climatic conditions of non-infected localities, adjacent to infected localities.

II. Increased physiological power of excretion.

III. Inheritance.

IV. Habituation to other poisons than yellow fever, and the production thereby of bodily conditions less favorable to this poison.

V. Habituation in infected localities to the poison of yellow fever.

VI. One attack of this non-recurring disease.

I. ACCLIMATISATION.

English and French physicians, military and civil, are now in perfect accord on this subject. This accord is due to many years of experiments in yellow fever regions, by which many thousands of lives and many millions of money have been sacrificed. As a result of these experiments, hospitals or camps of acclimation have been abandoned everywhere, as well as in

Cuba*, and have been replaced by encampments, in adjacent non-infected localties, solely for protection; the European soldiers' term of service has been shortened; and European troops have been replaced, as far as practicable, by Creoles and negroes. The testimony of some few of the most distinguished physicians, in military service, deserves record.

Recounting the various insanitary evils to which the British soldier in the West Indies was formerly subjected, Parkes says (p. 636, 5th Ed. Parkes Hygiene): "To us, these numerous causes seem sufficient to account for everything, but in former days an easier explanation was given. It was held to be the climate; and the climate, as in others parts of the world besides the West Indies, became the convenient excuse for pleasurable follies and agreeable vices. In order to do away with the effects of this dreadful climate, some mysterious power of acclimatisation was invoked. The European system required time to get accustomed, it was thought, to these climatic influences, and in order to quicken the process various measures were proposed. At one time it was the custom to bleed men on the voyage, so that their European blood might be removed, and the fresh blood which was made might be of the kind most germane to the West Indies. At other times an attack of fever (often brought on by reeckless drinking and exposure), was considered the grand preservative, and the seasoning fever was looked for with anxiety. The first statistical report of the army swept away all these fancies, and showed conclusively that, instead of prolonged residence producing acclimatisation and lessening disease, disease and mortality increased regularly with every year of residence."

Aitken teaches: "There can be acclimation to causes of disease, and climate per se, has been made to play the part of scape-goat for the neglect of sanitary precautions."

Dutroulau writes: (pp. 430–1) "No acclimation is acquired except by those who have passed through a preceding epidemic period, * * *, and above all by those who have had an

*The following have been acclimating stations for the soldiers of Spain, in Cuba: Guanabacoa, Güines, Isle of Pines, Jaruco, Mariel, Pinar del Rio, San Antonio, Santa Clara, and Santiago de las Vegas. Dr. Antonio Pardiñas, Medl. Dir. Military Hospitals in Havana, wrote, August 19th, 1879, "in regard to the different places of acclimation, they have given unsatisfactory results, as the Military Hospital Statistics will show."

attack of complete yellow fever." "When the epidemic broke out in Martinique, in 1851, the whole garrison had been in the colonies from four to five years, * * *, yet they furnished as many sick and dead as the sailors who had arrived only a few months or days before."

Cornillac (1873) testifies: "Acclimation is secured only by residence in infected places during epidemics" (p. 104). "Only those Indians and white Creoles enjoy immunity who live where yellow fever generally prevails" (p. 213), and "there is no acclimation against yellow fever. There is nothing except a first attack during an epidemic which can preserve one."

Du Bellay wrote in 1870, that acclimation is illusory, for he had seen many soldiers suffer with yellow fever who had been at Guadeloupe more than five years.

Féraud, writing in 1874 his experience of yellow fever in Africa, says: "At Senegal prolonged sojourn has no such happy acclimating effects as reported in the Antilles." Subsequently he served in the Antilles, and recording in 1878 his experience in Martinique, he found that the "happy acclimating effects" which had been reported, were not real, and concurs fully with the views of Dutroulau, Cornillac, etc.

The experience of the most eminent medical civilians is to the same effect in all yellow fever regions.

Heinemann states, while Vera Cruz acclimatizes its inhabitants, yet those living but a short distance, north, south or west, gain no immunity from yellow fever.

Dr. Armona, writing for Drs. Forns, Beltran, Morado and himself, physicians of Marianao, Cuba, states: "We all entertain little confidence in the immunity from yellow fever acquirable by long residence in this place (some six miles only from Havana); this lack of confidence is not simply limited to this locality, but extends generally to all places in Cuba where yellow fever does not occur. Instances are known to prove this; among these are the cases of two English mechanics, who after more than eight years residence on the adjacent Santa Rosa estate of Mr. Aldama, proceeded to Havana, to take passage home, and died in Havana of yellow fever. During said years

they had visited Havana, or other infected place very seldom and briefly."

Innumerable instances could be recorded of men residing fifteen years and more in non-infected tropical localities, and though yellow fever had invaded adjacent places north, east, south, and west of them, still the very same climate had effected so little, that they died of yellow fever on being subjected to an infected locality.

There can be no doubt, then, that immunity from yellow fever cannot be gained through the influence of climate, and therefore, that it is an abuse of language, due to past ignorance and misconception, to continue to designate the acquisition of immunity from yellow fever, "acclimation" or "acclimatisation." These deceiving words, and all of their derivatives continue to be the foundation of many errors and misconceptions, but, unfortunately they have gained such foothold that, in the absence of any one word to express the correct idea, it is very inconvenient to abolish them. In upholding this view, there is no intention to deny that those may be less liable to yellow fever, who have lost healthy plethora and vigor, have become weak and anemic through the influence of long continued heat, or the influence of any such cause as malarial poison which though a climatic coincident is not a climatic factor.

Are there any facts known, in reference to the acclimatisation of vegetables and of the lower animals, which would justify the belief, that immunity from yellow fever can be gained through the influence of climate? I have failed to find any such facts. There are many remarkable examples, illustrating the power of vegetables and animals to gradually accommodate their existence to different degrees of temperature, humidity, altitude, and of other climatic factors; but, there is no reason to believe that this gradual adaptation of physiological functions to widely different climates is associated with altered susceptibility to the action of poisons. This erroneous belief is due to confounding two very different things; for, the accommodation of physiological functions to the climate of a place, and habituation to some poison which happens to be in the same place are too very different things, which science

should cease to confuse by giving to both the same designation, acclimatisation. Only to the former process can this term be properly applied, and there are, in reference to it, some facts taught by botany and geology, important in the present connection.

Darwin teaches that acclimation is effected "by spontaneous variation, aided by habit, and regulated by natural selection." "Habit, however, much prolonged, rarely produces any effect on a plant propagated by buds; it apparently acts only through successive seminal generations." "With plants propagated by seed, and with animals, there will be little or no acclimatization unless the hardier individuals are either intentionally, or unconsciously preserved." De Quatrefages also teaches that the acclimatisation of plants and animals is acquired by hereditary descent; not years, but generations are required.

Each set of facts now presented unite to justify the conclusion, that immunity from yellow fever or other poison cannot be acquired by acclimatisation, that any influence exercised by climate is secondary, and slight, and that even this slight indirect influence is, as yet, unproved, therefore uncertain.

II. INCREASED POWER OF EXCRETION.

The view has been advocated that the varying excretory powers of individuals might serve to explain, at least, in part, their varying susceptibility to the poison of yellow fever; and that the comparative immunity of some persons, of tropical Creoles, of negroes, etc., might be due to the greater activity of their excretory functions.

There are only four great excretory organs, the lungs, kidneys, bowels, and skin. As is well known, the functions of the three former are diminished by heat, and therefore reduced in summer, and in the tropics. Hence, the discussion is reduced to increased excretion by the skin, which, there is reason to suspect, may be the organ by which the poison of yellow fever is chiefly eliminated. The odor, the profuse sweating, the petechiae, the boils of yellow fever, give countenance to this suspicion. But, science is destitute of facts tending to prove that the skins of acclimated residents are more active

than the skins of unacclimated new-comers. Contrasting northerners with southerners the reverse is probably true, since an unusual stimulant excites an organ's function more than an habitual stimulant. We have still less reason to credit any difference between the cutaneous functions of those who reside in a non-infected locality, within a few miles even of an infected locality, and of those who reside in the latter, yet the liability of the former is very much greater. While admitting that an active skin will eliminate more poison than one less active, it seems inadmissible that, on the administration of a fatal dose, a skin, even the most active, could eliminate so completely and rapidly the whole dose, that no effects are perceptible, and perfect health remains undisturbed. Healthy activity of the excretory organs is certainly desirable whenever there is exposure to a poison, but the various facts presented, in regard to immunity from the poison of yellow fever, cannot be explained by the theory that the varying immunity is due to varying excretory power.

III. INHERITANCE.

It may be naturally presumed, that parents who have acquired exemption from a non-recurring disease would be more apt to beget children insusceptible to said disease. However, although there are a number of these diseases, no evidence has been presented favoring this supposition. The subject deserves research. Several generations, if not the first, might show lessened susceptibility. The little reliable evidence, I have gathered on this subject, as it respects yellow fever, is entirely unfavorable.

Dr. Burgess reported the death, by undoubted yellow fever in 1879, in Havana, of a child 3–4 years old, born in Europe of acclimated Cuban Creoles. My colleague, Professor Logan reported to the Orleans Parish Medical Society, the following facts:

His ancestors had resided in Charleston, S. C., since the 17th century, and were presumably acclimated. His father and mother certainly were. They had eleven children of whom nine at least had suffered with yellow fever. His brother, one

of these nine, married a Creole, member of an old acclimated family of New Orleans, who bore him two children between the great epidemics of 1858 and 1867; both of these were attacked in 1867; four others were born between 1867 and the next great epidemic in 1878, during which all four were attacked, two violently, and one had black vomit.

The conclusion seems justifiable, that any influence exercised by inheritance is too slight and uncertain to explain the apparent immunity enjoyed in infected localities, by even the first generation of natives. This conclusion is not at variance with the belief, that a foetus, in the womb, during the time when the mother recovered from an attack of yellow fever, may have suffered with her, and thereby have become insusceptible to a second attack; nor, is it at variance with the belief, that, by the survival of those fittest to resist the poison of yellow fever, successive generations, born in habitually infected localities, might become less and less liable to the disease.

IV. HABITUATION TO OTHER POISONS THAN THAT OF YELLOW FEVER.

Recent researches on the antagonism of medicines encourage the suspicion that there may be antagonistic disease poisons, and that habituation to one might destroy or diminish the susceptibility to another. To what extent is this view justified by facts, so far as yellow fever is concerned?

It has been taught that those engaged in occupations which exposed them to putrid emanations were less liable to yellow fever. This teaching is founded on that kind of ipse dixit evidence, which is valueless in science; and is frequently associated, in some other part of the same book, with the discordant lesson that yellow fever is caused by and has a spontaneous origin in putrid emanations.

It has also been taught that those exposed to malaria were less liable to yellow fever. It is however, well known that persons saturated with malaria, and even while suffering violently therewith, are not infrequently attacked by yellow fever. All the facts we have, tend to prove that there is no antagonism between the poison of yellow fever, and the poisons of malaria, cholera, and small-pox. Each of these three diseases

have been repeatedly seen co-existing in the same person with yellow fever; and it is worth noting that in such cases, while yellow fever predominates over swamp fever, small-pox and cholera are reported always to predominate over yellow fever. Notwithstanding all this, there is some reason to suspect that the anemic and feeble may be less liable to yellow fever than the robust and plethoric; and, as is well known, anemia, the sequence in large measure of malaria, is the prevailing pathological characteristic of the inhabitants of tropical malarious low lands. An intelligent American from the swamps of Illinois, long resident in Havana, was very positive that his countrymen from malarial districts had suffered less with yellow fever, than those from non-malarious localities. But since, even these do suffer often severely and in large number, it is impossible to admit more than that these causes may exercise a slightly favorable influence, while totally insufficient to explain the wholesale immunity, apparently enjoyed, by the natives of habitually infected localities.

V.—HABITUATION IN INFECTED LOCALITIES TO THE POISON OF YELLOW FEVER.

Since the facts, thus far presented, are inadequate to account for the apparent immunity from yellow fever, enjoyed by vast numbers if not by all of the children and natives of such places as Havana and Vera Cruz, the cause of this wholesale immunity must be due either to the gradual habituation to the poison of yellow fever, or to the well known influence of a first attack.

Thus far, science fails to teach that there is any disease-poison possessing the wonderful power claimed for the poison of yellow fever, viz: that children, subjected to its influence, become insusceptible to, without suffering from it. The only approximative instance is furnished by the much milder protective, but very manifest disease, which results from inoculation of the small-pox virus, and from vaccination.

As to other poisons, none of which, says Taylor, are inorganic, such as alcohol, tobacco and opium,—it is well known, that, while some few persons show on the one hand excessive susceptibility to small, and, on the other hand, excessive toler-

ance (independant of habit) for large doses, both of which may be lost—all persons have the power to habituate themselves to toxic doses. But how is this power gained, and at what expense? It is gained through small, always non-fatal doses, long continued; and it is gained at the expense of health. Taylor concurs with other toxicologists in teaching that "as a general principle, we must admit that habit cannot altogether counteract the insidious effects of poisons; and that the practice of taking them is liable to give rise to disease or to impair health." Now, if children gain immunity from yellow fever by habituation to its poison, then the extraordinary and solitary example is presented of one poison, which can, with impunity, and without any subsequent impairment of health, be administered to little children in doses fatal to unacclimated adults. This seems incredible.

But, statistical records unite with general experience in proving, that at least sucklings suffer comparatively little from the poison of yellow fever, as also of several other zymotic diseases. Granting this due to a real, and not to a merely apparent insusceptibility; then, even in such case, can the supposition be justified that these insusceptible children may be so dosed with the poison, that habituation to it, without causing any disturbance, protects them forever afterwards; not only on arrival at the susceptible age, but also on return to an infected locality after many years cessation of the use of the poison, the result of prolonged residence in some distant non infected locality? Excluding yellow fever, no such wonderful results have ever been claimed for any other poison whatever. No medicinal poison, no disease-poison acts in this wise, as far as now known to science. This view is not only repugnant to the knowledge possessed of all other poisons, but it is repugnant to the teachings of physiology. The healthy body manifests a constant tendency to return, after subjection to abnormal conditions, to its usual normal state. Even the reformed opium eater, habituated to enormous doses, cannot, after their long discontinuance, venture to resume the poisonous dose once comparatively harmless.

There are many indisputable instances of persons residing in annually infected localities for more than five years, some for even more than thirty years, and dying with yellow fever, even after such prolonged exposure. These cases, whatever else they may prove, certainly fail to prove, that immunity is easily to be procured by habituation to the poison.

In the face of these weighty objections, there are many physicians, always most numerous and positive where yellow fever most prevails, who would have us waive these aside, rather than believe, that they are in error in respect to that difficult matter, the diagnosis, especially of the milder attacks, of yellow fever. A matter so difficult, that some, even of the most serious cases, notoriously give rise, during every invasion of the disease, to differences of opinion between physicians of the greatest experience and attainments. It is certainly far easier to credit fallibility in diagnosis and observation, than to credit that the poison of yellow fever has a mode of action entirely unlike the action of every other known poison; for man's proneness to err is as remarkable as is the uniformity of nature's action.

VI. IMMUNITY GAINED BY ONE ATTACK.

The only known mode of acquiring immunity from every other non-recurring disease is to have one attack; and, so far as yellow fever is concerned, while various modes are claimed, this remains the only one so certain, that no one whatever disputes it.

Mindful of the varying susceptibility of races, as also of individuals and classes of the same race, no one will be disposod to deny that there are causes, such as have been referred to, and other than an attack of the disease, which tend to so affect the constituents of man's body, that its susceptibility to the poison is diminished. None the less, facts will now be presented in proof that immunity from yellow fever is acquired by a large majority of the natives of infected places, in the same manner it is acquired by unacclimated immigrants, and in the very same manner that immunity from every other non-recurring disease is acquired. Nature often contradicts herself in

appearance, but never in reality. Although I, in 1870, solicited professional attention to this same class of facts, yet they are now presented, for the first time, in a form so extensive and decisive, that their all important significance cannot be doubted. Fortunately these facts are so patent, that they appeal to the common sense, even of the unprofessional; and they are independent of diagnostic subtleties, such as, whether every case of yellow fever must be characterized by a special pulse and heat curve, or by some albuminuria, or by so much blood and so little bile in the vomit, or by a special hue, or by a diagnostic facies, *et id omne genus.*

These facts will be found in the appended statistical tables; the first of which consists exclusively of official data of population from the United States census, and of deaths from the Board of Health in New Orleans; the second table consists of results obtained by calculations based on the original data in the first table—calculations designed to facilitate the interpretation of these original data. These tables present the facts, pertinent to our subject, as they have occurred in New Orleans since 1856, that is as far back as authentic records can now be procured. This period includes three of the most disastrous epidemics—1858, 1867, 1878—which have ever desolated New Orleans, and the tables present the results of these epidemics in contrast with the non-epidemic years which immediately preceded, and succeeded each of the three epidemic years. It will aid a thorough interpretation of the facts to state, that New Orleans suffered disastrous epidemics during the three consecutive years 1853-4-5; that in 1870 there were 587 deaths by yellow fever, and 226 in 1873; that these years teach, less strikingly, of course, the very same lessons, taught by the violently epidemic years; and that, until 1858, the great majority of the medical profession of New Orleans taught with as much vehemence as some few of them still do, and as nearly all the physicians of Havana and Cuba now teach, that the native born Creole children and adults enjoyed absolute immunity from yellow fever. Hence it is not doubted that similar

statistics for Havana and all cities infected by yellow fever, will, if ever obtained, teach the same lessons taught by the statistics of New Orleans now presented. What are the lessons thus taught?

First—Comparing every epidemic year with the non-epidemic year which both preceded and succeeded it, there will be found invariably an enormous excess during every epidemic year, in the deaths of children under 10 years of age. It will farther be found, that this notable excess in the annual deaths invariably occurred during the very months when yellow fever devastated the city. What killed these children? If yellow fever did not destroy them, then there must be some one or more disease poisons, which are invariably associated with the yellow fever poison; and, which have the astounding peculiarity that, at the very time when the latter is destroying the adults, the former are slaughtering the children. There is no escape from the conclusion, that, either the children of New Orleans, are very susceptible to yellow fever, or that some other children's disease-poison always accompanies the poison of yellow fever—an alternative opposed to a prevalent opinion that, during epidemics, the acclimated generally enjoy better health. Those, who deny the former, deserve no consideration until they have explained the latter alternative. In illustration of other epidemic years, consider the significance of the following indisputable facts from the cemeteries of New Orleans, as to our last great epidemic. Of children under 10 years of age, the average number of deaths for the two non-epidemic years, 1877, 1879, was 2024, but in 1878 the number was 3930, or nearly double, being 1906 more than the average of the non-epidemic years. Searching for the period of the year, when this excess occurred it will be found that, more than 1906, even 2023 died during the three epidemic months, than did die during these same months in 1877 and 1879. Once more, what killed this excess of 2023 children? Let it be noted, that the statistics state that 1482 of them, and only 1482, died of yellow fever; and among other things, indicate decisively the comparative insusceptibility of colored children.

SECOND—The tables prove that invariably during every epidemic year, and during the very months of said year when the epidemic prevailed, there was always an enormous increase in the certified deaths by certain fevers, especially by "bilious," "congestive," "pernicious," "malignant" fever (four types of malarial fever), and by "typhoid" and "typhus" fever. In this matter, let it be observed, that the statistics turn aside from the simple and reliable tally of the sexton, and become dependant on the diagnostic skill and theories of the doctor. Were he as reliable as the sexton, he would leave no alternative to the belief that the poisons of swamp, of typhoid, and of typhus fever invariably accompany the poison of yellow fever, always increasing and decreasing *pari passû* with this. The doctors of Havana, and of Matanzas—and probably everywhere else in Cuba—unite, as shown by their mortality statistics, in teaching this very same lesson taught by the doctors of New Orleans. Since these doctors have been so unconscious of their own curious teaching, that they have even failed to call attention to it, and since it imposes a great strain on professional credulity, science must incredulously await proofs much stronger than those dependent on disputable diagnosis, before crediting that either malarial, typhoid, typhus, or any other disease-poison invariably accompanies yellow fever, always increasing and decreasing with it.

THIRD—This same class of facts, derived from a comparison between the *certified* deaths by yellow fever, and by all other fevers which can be mistaken for it, and for convenience are designated "malarial fevers," teaches another important lesson. The many physicians now in New Orleans, who no longer credit the alleged immunity of Creole children from yellow fever, have long contended that most of the deaths by the so-called malarial fevers during epidemics of yellow fever were really due to this disease; but, even if this probable supposition be accepted as the truth, and all these deaths be added to those of yellow fever, this sum fails to equal the excess of deaths which invariably occurs during epidemic years. Hence, if this excess be due to yellow fever,

there must still be other diseases with which yellow fever is repeatedly confounded; probably such diseases as are certified, to have caused death by "convulsions," "cerebral congestion," "teething," etc. This strong probability still further confirms the unreliability of the diagnosis of yellow fever.

FOURTH—Accepting the conclusion, that the excess of deaths which did occur during the prevalence of every epidemic, was due to yellow fever, then it is in our power to estimate the comparative susceptibility at different ages. This has been done in Table No. 2, and for the first time, so far as known to me, in the literature of yellow fever, trustworthy data are presented of the ratio of deaths at different ages to the population corresponding to those ages. Examining the last two columns of the table, which refer to the last epidemic, and illustrate like facts concerning the epidemics of 1858 and 1867, it will be found: that there was an increased mortality in children under one year, but that this increase was comparatively slight; that this increase was much greater in children from 1–2 years old; that this increase was enormous in children from 2–5 years old, so that there were 89.4 deaths in every 1000 of these in 1878, in place of 19.6 deaths in every 1000 in the non-epidemic years, 1877 and 1879; and that this more than quadruple increase is not equalled at any other ages. While facts of this class as to other epidemics are similar, they are by no means identical. To comprehend these variations, it is indispensable to bear in mind the variations in the circumstances of the population, otherwise the student will be led astray. Take the epidemic of 1858 as an illustration. When it is known that the population of New Orleans had been subjected, so shortly before, to the three violent epidemics of 1853-4-5, and that, during this prosperous period of the city's history, unacclimated immigrants, chiefly from 15-40 years old, flocked to it in numbers far greater than subsequently, no one will be surprised to find that the mortality in 1858, compared with 1878, was less in those under 15 years, and greater in those from 15-40 years of age.

FIFTH—Accepting the conclusion, drawn from the cemeteries,

that the excess of deaths during an epidemic are due to the disease causing the epidemic, and again, taking the 1878 epidemic as an illustration, we are forced to admit that somewhere between 1406 and 2023 children under 10 years of age, must have been killed by yellow fever; and, therefore, that a very much larger number recovered from the disease, thereby gaining that absolute immunity, which it is claimed is the birth-right of Creole children independent of any such process. What number of the Creole children of New Orleans gained their immunity from yellow fever in 1878, becoming "acclimated" by an attack of yellow fever? Of course this question can only be answered by vague approximations, for, failure to report cases, and diagnostic difficulties deprive us of the most important factors in the problem. None the less, there are some facts which throw a little light on the difficulty. In 1878, the children under 10 years of age numbered about 50,000; of these, probably more than 10,000 fled from the city; more than 10,000 were under 2 years of age, at which age so few died that we are justified in presuming them to be little susceptible to the disease or at least to fatal attacks, and some had, no doubt, gained immunity from 1867 to 1878, especially in 1870 and 1873, by an attack of yellow fever. Probably then, there were in New Orleans in 1878, less than 30,000 susceptible children exposed. If 2000 of these died, then there could not have been less than 6000 who recovered, even if we suppose children liable to as violent and as readily diagnosed attacks of yellow fever as are adults. But no one claims this; on the contrary, all who believe that Creole children do not enjoy immunity from yellow fever, contend that these, especially the youngest, are, like the negro, less susceptible, and therefore liable to protective attacks, which are often too mild to justify an absolute diagnosis. In this view of the case, it would be reasonable to increase many times the previously assumed 6000, in order to fairly represent the probable number of the children in New Orleans, who gained immunity from yellow fever in 1878 by undergoing an attack of the disease.

Finally, mild, benign, aborted or bastard yellow fever,

deserves a brief consideration in this connection. That there is such a type of the disease is as certain as are discrete variola, varioloid, scarlatinous sore throat, choleraic diarrhœa, extremely mild typhoid fever, etc., so certain that wherever yellow fever prevails, there there always have been and are still physicians of noted skill testifying to the prevalence of this form of the disease. In 1878, Féraud wrote the ablest and the only extensive treatise yet written, on this form, as it exists in Martinique. He concludes, with hesitation, to adopt the term more commonly employed to designate it among French Creoles; but, while thus designating it "bilious inflammatory fever," he assures us, that it is the very same disease known by not less than twenty-one other names, among these are those I have used above and also "acclimating fever," which he wisely suggests ought rather to be called the "fever of immunity." With Dutroulau, Cornillac, Blair and hundreds of others, he teaches that this disease is due to the poison of yellow fever, that Creole children are very liable to it, as are also unacclimated immigrants, that its multiplicity of names indicate the difficulty of diagnosing it, and that its attacks frequently fail to confer immunity. Since it is so difficult to diagnose, the suspicion is justifiable that failures to confer immunity are proofs of diagnostic errors. But, discarding this suspicion, science teaches nothing, which is repugnant to the view held by Dutroulau, Blair, and others, that only an attack of "complete" yellow fever, which has run through "its two stages" can confer an immunity so absolute, that it can be relied on always, and by all. Incomplete attacks may or may not protect, just as one vaccination suffices for some, but fails for others. This view gains strength from two others considerations. First, from the recently reported experiments of Pasteur, which demonstrate that chicken cholera germs find in different chickens a very variable amount of the pabulum on which these germs feed and multiply, thus producing the disease; and that weak inoculations, varying in different chickens, from one to four, and causing attacks varying in intensity, are required

to confer immunity from the disease. Second, young children, being less susceptible to the poison should be less sickened by it; and while, on the one hand, this milder attack may be less destructive of the pabulum which the poison feeds on, on the other hand their growing condition would be more apt to reproduce this pabulum, and thus renew their susceptibility. Without this old hypothesis, which Pasteur experimentally justifies by having proved its truth in chicken cholera, it seems impossible to explain many cases like the following: The young brother of Dr. Montané of Havana, passed all of his childhood in that constantly infected city, then, after residing nine years in France, returned to Havana and died with yellow fever, so well marked, that, if I am correctly informed, no one questioned the cause of his death. Dr. Heinemann, of the constantly infected city of Vera Cruz, reports the death in that city, by well marked yellow fever, of an aged physician, a native of Vera Cruz, and long in charge of its military hospital, on his return to his old home after a few years residence in the City of Mexico.

While such cases may be thus explained, their great comparative rarity furnishes additional reason for the conviction, that the vast majority of Creole children do undergo attacks, due to the poison of yellow fever; attacks, which however mild, suffice to protect, fully as frequently as vaccination, limited to the single period of infancy, protects from small-pox. This view, long maintained by many physicians in New Orleans, is in full accord with Féraud's, and apparently with the view of all the more recent French medical authorities at Martinique. But of far more weight are the facts that this view is in accord with the mortality statistics; with experience in all other non-recurring diseases; and with the general observation, in all yellow fever places, that when epidemics prevail obscure, ill-defined fevers, which different doctors baptize with a multiplicity of different names, accompany these epidemics. It is not doubted that a careful and prolonged study, with the record of all such cases, especially as occurring in children, and of their influence in after life on immunity, would elti-

mately convince all the distinguished physicians of Cuba, that very many of these cases, however mild they may be, are due to the poison of yellow fever, and are in very numerous, if not in all cases, "fevers of immunity."

In the meantime, it is believed, that no one, who rejects this view, will find it possible to explain the significance of the indisputable facts recorded in the following statistical tables, and to answer, what disease is it, if not yellow fever, which invariably increases the mortality of children, during the very time when yellow fever is increasing the mortality of adults?

TABLE No. 1.

Giving the Population, and the Deaths in NEW ORLEANS, by ages, the deaths being given not only for the YELLOW FEVER Epidemic Years 1858, 1867, 1878, and for the months of greatest prevalence but also for the non-epidemic years immediately preceding and succeeding each of said three epidemic years:—thereby proving an invariably great excess of deaths during every epidemic of (1) persons under 10 years as well as of other ages, and (2) of so-called Malarial and other Fevers. The deaths by age and race of those dying with YELLOW and with MALARIAL FEVERS are given for 1878 and 1879 only, since these data were furnished for the first time by the Annual Reports of said years.

	1857.			1858.		1859.			1866.		1867.		1868			1877.		1878.		1879.		1878.				1879.			
																						Yellow Fever.		Malarial Fevers.		Yellow Fever		Malarial Fevers	
	Population by U. S. Census of 1860.	Total Annual deaths	Deaths for the 3 mos. Aug., Sept., Oct.	Total Annual Deaths	Deaths for the 3 mos. Aug., Sept., Oct.	Total Annual Deaths	Deaths for the 3 mos. Aug. Sept. Oct.	Population by U. S. Census of 1870.	Total Annual Deaths.	Deaths for the 3 mos Sept., Oct.	Total Annual Deaths	Deaths for the 3 mos Sept., Oct.	Total Annual Deaths	Deaths for the 3 mos Sept., Oct.	Population estimated The U.S. Census, 70. for 1875 by La. State Board of Health.	Total Annual Deaths.	Deaths for the 3 mos. Aug., Sept., Oct.	Total Annual Deaths.	Deaths for the 3 mos. Aug., Sept., Oct.	Total Annual Deaths	Deaths for the 3 mos. Aug., Sept., Oct.	White.	Colored.	White.	Colored.	White.	Colored.	White	Colored.
*Still Born.....	.....	358	91	338	110	353	94	.....	412	79	510	120	505	86	.....	451	103	399	103	379	103	.....	.....	.....	.....	..	..	..	..
Under 1 Year....	3,637	1568	415	1944	632	1609	404	5,135	1524	275	1863	461	1608	241	5,692	1228	260	1259	402	1115	219	53	5	40	15	..	..	13	15
1 — 2 Years .. }	18,874	468	107	603	239	538	128	4,183	518	71	529	175	364	59	4,636	437	86	455	271	161	54	111	11	43	11	2	..	5	7
2— 5 .. .. }		475	89	1001	616	505	104	15,387	510	110	566	278	229	43	17,033	441	71	1523	1228	227	56	863	38	196	29	4	..	8	6
5—10	19,038	205	34	365	178	326	81	21,114	360	82	491	311	152	49	23,422	308	59	693	543	132	37	379	22	95	19	1	..	7	4
10—15	15,365	117	21	293	178	153	31	21.000	172	51	253	141	90	15	22,211	170	34	288	225	97	29	176	14	26	6	1	..	9	3
15—20	15,595	130	41	579	418	231	71	19,583	244	77	466	286	132	31	20,538	270	56	416	275	127	33	216	9	21	7	3	..	8	3
0—10	41.549	2716	645	3913	1665	2978	717	45,819	2912	538	3449	1225	2353	392	50,783	2414	476	3930	2444	1635	366	1406	76	374	74	7	..	33	32
10—20	30,960	247	62	872	596	384	102	40,583	416	128	719	427	222	46	42,749	440	90	704	500	224	62	392	23	47	13	4	..	17	6
20—30	36,100	715	216	3025	2263	994	290	34,340	1069	336	1981	1216	508	101	38,155	916	177	1549	1060	520	138	875	34	57	12	4	..	20	9
30—40	30,963	768	195	2001	1283	025	283	28,804	991	304	1441	730	588	118	31,941	709	144	1392	888	588	126	683	25	52	11	1	..	26	1
40—50 .. .	18,185	523	144	1040	500	762	182	21,967	737	192	946	349	488	90	24,267	757	171	977	456	594	136	284	11	45	12	3	..	24	6
50—60	6,770	297	77	463	201	331	95	12,267	520	135	604	198	396	86	13,610	570	121	706	274	526	95	120	6	31	8	..	..	18	1
60—70	2,890	155	38	216	101	196	52	5,374	333	81	344	80	266	64	5,967	445	98	466	148	439	97	32	3	14	7	..	..	7	1
70—80	810	97	23	118	43	95	26	1.711	147	27	163	41	136	21	1,974	273	69	313	85	313	57	14	2	7	4	..	..	5	2
80—90	255	38	4	45	10	51	13	398	51	10	70	17	62	10	441	99	13	121	22	105	20	1	...	2	2	..	..	...	..
Over 90	113	24	5	17	8	31	10	155	29	3	22	4	31	4	167	52	5	44	14	46	11	.....	1	.....	.....	..	..	...	..
Not stated.....	80	....	....	...	....	.	....	.....	549	145	357	150	293	125	.....	30	7	115	93	32	5	56	2	5	..	..	..	1	..
Total Population White.....	144,601		...				....	140.923	....	....	....	....	....	....	155,000	....	....		...	....	....	....	..	..		..	..	..	..
Colored	24,074	....	....				....	50,495	..		....	....	...	....	55.000	....	....		...	.	.....	....	....	...	..	..	..		..
	168,675							191,418							210,054														
Total deaths by all diseases...	.....	5581	1410	11710	6670	6847	1780	.....	7754	1899	10096	4437	5343	1057	.....	6708	1375	10318	5984	5122	1113	....	...	...	..	..	..	..	..
Deaths by Yellow Fever....	.....	199	107	4855	4481	91	60	....	192	149	[illegible]	[illegible]	5	1	.....	1	....	4046	3870	19	16	3863	183	..	..	19	..	..	..
†Deaths by other Fevers, especially Malarial		267	99	686	396	543	249	.....	676	241	[illegible]	[illegible]	433	159	.....	409	190	777	569	209	81	....	...	634	143	..	..	151	58

* The Still Born are specially given because included in those "under 1 year, &c." in 1857-58 59, 1866-67-68, but excluded in 1877,-78-79 from all the annual data of Mortality.

† The fevers thus summarized were specified as follows: "Bilious, Congestive, Pernicious, Malignant, Typhoid, Typhus, Remittent, Intermittent, Chagres, Brain, Nervous, and Gastric Fever." It is specially noteworthy that the first six always increased notably during every Yellow Fever Epidemic.

[TABLE No. 2.] ESTIMATES DERIVED FROM THE DATA IN THE PRECEDING TABLE.

	1858.				1867.				1878.			
	1858 COMPARED WITH THE AVERAGE OF 1857 AND 1859.				1867 COMPARED WITH THE AVERAGE OF 1866 AND 1868.				1878 COMPARED WITH THE AVERAGE OF 1877 AND 1879.			
	Excess of deaths in 1858 over the average annual deaths in 1857 and 1859.	Excess of deaths in Aug., Sep., Oct., 1858, over the average of same months in 1857 and 1859.	Ratio of the average deaths in 1857 and 1859, to the population of 1860.	Ratio of deaths in 1858, to the population of 1860.	Excess of deaths in 1867, over the average annual deaths in 1866 and 1868.	Excess of deaths in Sept. and Oct., 1867, over the average of same months in 1866 and 1868.	Ratio of the average deaths in 1866 and 1868, to the population of 1870.	Ratio of deaths in 1867, to the population of 1870.	Excess of deaths in 1878, over the average annual deaths in 1877 and 1879.	Excess of deaths in Aug., Sep., Oct., 1878, over the average of same months in 1877 and 1879.	Ratio of the average deaths in 1877 and 1879, to the population of 1875.	Ratio of deaths in 1878, to the population of 1875.
Under 1 Year.	356	223	436.6	534.5	297	203	305.0	362 8	88	163	205.7*	219.4*
1—2 Years.	100	122	.....	.....	88	110	105.4	126.5	156	201	64.5	98.0
2—5 "	511	520	52.6	85.0	197	202	24.0	36 8	1189	1165	19.6	89 4
5—10 "	100	121	13.9	19.2	235	246	12.1	23.3	473	495	9.4	29.6
10—15 "	158	152	8.8	12.6	122	108	6.2	12.0	155	194	6.0	13 0
15—20 "	394	362	11 9	37.1	278	232	9 6	23.7	218	231	9.6	20.3
0—10 Years.	1066	984	68.5	94.2	817	760	57.4	75.3	1906	2023	39.9	77.4
10—20 "	557	514	10.2	28.2	400	340	7.9	17.7	372	424	7.8	16.5
20—30 "	2171	2060	23.7	83.8	1193	998	22.9	57.6	831	903	18 8	40.6
30—40 "	1105	1044	28.9	64.6	652	519	27.4	50.0	744	753	20 3	43.6
40—50 "	398	347	35.3	57.2	334	208	27.9	43.1	302	303	27.8	40.3
50—60 "	149	115	46.4	68.7	146	88	37.3	49.2	158	166	40.3	51.9
60—70 "	41	56	60.5	75.1	45	8	55 6	64 0	24	51	74.1	78.1
70—80 "	22	14	118.5	145 7	22	17	82.4	95.3	20	22	148.4	158.6
80—90 "	1	2	172.5	176.5	14	7	140.7	175.9	19	6	231.3	274 3
Over 90 "	.....	1	238.9	150.4	....	1	193.5	142 0	....	6	293.4	263.5
Not Stated.	.....	.....	.....	.....	....	15	.....	.....	84	87	.....	.....
Excess of deaths. By all Diseases..	5556	5075	36.9	69.4	3548	2959	34.2	52.7	4403	4740	28.2	49.1
Excess of deaths. By Yellow Fever..	4710	4399	.7	28.8	3009	2634	.0	16.8	4036	3862	.0	19.3
Excess of deaths. By other fevers..	281	222	2.4	4.6	414	292	2 9	5.1	468	434	1.5	3.7

*It must not be forgotten, that, in order to make a rigid comparison between these figures, for 1877–8–9, and the corresponding ones for 1857–8–9, and 1866-7-8, the still-births should not be excluded, as they were from the former, while included in the latter.

Report on the Epidemic of Yellow Fever, which raged at New Orleans in 1878.

By Dr. E. BERJOT,

Formerly Physician-in-Chief to the Imperial French Marine Hospital at Havana

APHORISMS.

(1.) Yellow fever is endemic at New Orleans, as at Vera Cruz and Havana.

(2.) Yellow fever submits to the first frosts—to ice, and not to white frost.

(3.) Cases of yellow fever become more numerous after rains, in the course of an epidemic.

(4.) Local stagnation favors its development, just as filth and high temperature promote its propagation.

(5.) The north wind is fatal to those affected with yellow fever.

(6.) Secondary attacks may occur in yellow fever, as in variola, but they are quite rare.

(7.) Yellow fever is contagious.

(8.) Young Creoles may take yellow fever, but they are most liable to it in infancy.

(9.) A body temperature of 106° warrants a fatal prognosis.

(10.) The supervention of the menstrual flow in female subjects of yellow fever is a favorable crisis.

(11.) Albuminuria is not always proof of yellow fever, but it is found often, if not always.

(12.) The only good proof of acclimation in New Orleans is an attack of yellow fever. Whoever has not had it, is liable to it.

(13.) The mortality is always higher among children, for three reasons: (a) their feeble resistance to the disease; (b) the difficulty experienced by parents in administering remedies internally; (c) the dread of opposing them, which is felt by their attendants, or of provoking their cries, and sometimes difficulty of diagnosis.

(14.) Ventilation of dwellings is a good precaution after an epidemic, and ought to be generally practiced.

(15.) There is no prophylactic against yellow fever, except a discreet hygiene—to use all means and abuse none.

OBSERVATIONS.

1. The disinfection of a city located like New Orleans seems to me impossible and useless, by reason of its situation between salt and fresh waters; the bayous of stagnant water which are so abundant from Lake Pontchartrain to the river and from the neighboring parishes above down to the sea.

2. What is the cause of yellow fever? Is it a noxious miasm; a ferment; a kind of vegetable organism; elevated temperature; bayous; peculiar topography; stagnation or subsidence of streams and rivers? Such and many more are the questions which deserve the consideration of physicians, of chemists and of naturalists, and to which I look for no answer but hypothesis.

3. Of what advantage is quarantine in a country where yellow fever is endemic? I apply it only to vessels coming from infected ports. As to quarantine between cities and towns in the same region, I regard it as very damaging to commercial interests and totally useless for preventing its spread. There is no barrier for scourges which are wafted by the winds. The history of the epidemic of 1878 proves this too thoroughly.

4. Most of the paludal fevers, intermittent, remittent and bilious, of warm climates, which prevailed at New Orleans in 1878, constantly presented some symptoms of yellow fever, and yielded to the usual remedy, quinine.

5. For my part, if allowed to express an opinion, I should say that I attribute yellow fever to elevated temperature, to subsidence of streams and rivers; from which, in my opinion, spring noxious miasms, which are transported by the winds. No further proof is needed than the fevers of Africa, which never cease and are sure to appear when the rivers dry up. The same is found throughout the south of France, throughout Spain, and even at Paris.

I regret my inability to dwell upon a subject of so vast importance; but I do not forget that this is merely a report which I have the honor to make to the members of the Board of Health.

TREATMENT.

At the beginning, an ipecac emetic, foot-bath or sinapisms to the calves and afterward to the feet; cups to the nucha, for subjects of sanguine temperament; purgative lemonade, seidlitz water, barley water; then, *pro re nata*, oleaginous mixture, emollient enemata twice a day; liniment of pure tincture of capsicum, with the addition of a little camphorated oil in case the patient can not bear it; linseed poultices to the abdomen, ice in the mouth, compresses of vinegar and ice-water to the head, a revulsive chloroform compress to the epigastrium, or mustard powder applied the same way, sinapisms to the kidneys to stimulate their functions, chlorate of potash draught, seltz water sweetened with vinegar syrup, the anti-emetic draught of Rivière, draught of perchloride of iron, syrup of iodide of iron, sometimes calomel and scammony; quinine never, at least in intermission of the pulse. Jaborandi, to favor perspiration; likewise aqua ammoniæ, dose six drops every half hour in infusion of violets, for the same purpose, until diaphoresis is established. Bromide of potassum in persistent headache. Champagne wine, toddies and wine of cinchona. Nourish the patient, as soon as the pulse falls to 60 beats in the minute, with cold or even iced broth. Never apply blisters to the epigastrium, as they provoke cystitis and retention of urine. Occasionally chloral hydrate, to relieve colic and induce sleep. Enemata, tonic, anti-spasmodic or nutritive, according to indication. Catheterism when required, but seldom of any use.

As local disinfectant, sulphur fumigation in closed apartments; afterwards, free ventilation. Such is the method employed by me aboard ship and at the dwellings of my patients.

It is understood that the above treatment is to be adapted to cases, and modified according to indications and the discretion of the physician. Many recover with little or no medication. I have seen individuals affected with yellow fever of so mild a type, that they were not interrupted in their business.

The foregoing, gentlemen, is the result of my experience. With this treatment I have lost eleven per cent., and I shall be glad if the Board of Health can point to a treatment more cer-

tain and efficacious, for to my mind the therapeutics of yellow fever is still an open question.

[The foregoing paper was addressed by its author to the Board of Health, and was offered by the President of the Board to this journal for publication. As it may be considered an expression of the views of some of our Creole medical *confréres*, we have made a translation, for the purpose of giving it to our readers, having reserved the right of answering such doctrines of the author as we consider untenable, to which he has assented. Only the propositions from which we dissent, will here be noticed, and these will be taken up *seriatim*.

COMMENTS ON THE APHORISMS.

(1.) We do not regard the term "endemic" as properly applicable to yellow fever in New Orleans. "A disease is said to be endemic, when it is owing to some peculiarity in a situation or locality" (Dunglison). In (5) of his *observations*, the reader will find the particular local causes, to which Dr. Berjot attributes yellow fever. Now it cannot be denied that these conditions prevailed on the site of New Orleans quite as decidedly before the first appearance of yellow fever, toward the close of the last century, as they do at present; nor that the same conditions are found in various parts of the world where yellow fever has never been known—notably so in southern Asia and the tropical islands of the eastern hemisphere.

Again, an endemic disease should prevail in its *habitat* every year: not so with yellow fever at New Orleans.

Our city is the only locality in the United States, where yellow fever is regarded as an endemic disease. Those who object to this invidious distinction, have a right to demand what are the particular local causes existing here, rather than at Mobile, at Galveston, at Pensacola, at Key West, at Savannah, at Charleston.

The idea of the endemicity of yellow fever at New Orleans evidently originated in the fact that the disease has visited our city oftener than any other in the country; and this fact is just as clearly attributable to our closer commercial intercourse with the permanent seats of the fever. On the other hand, the exemption of the tropical shores of the Pacific and Indian

oceans is plainly due to want of commercial intercouse with the West Indies. This intercourse has caused Spain and the west coast of Africa to be repeatedly and severely scourged, while many small islands of the West Indies, of no commercial importance, have rarely or never been visited by the fever.

Moreover, we do not admit that yellow fever is essentially an endemic disease (that is, attributable to localized causes) in any region whatever. Its natural history and analogies indicate a specific poison and ally it with those diseases which attack an individual but once, such as typhoid fever and scarlatina. At the same time, a continued high temperature, with a constant supply of subjects and neglect of hygienic measures, may allow it a prolonged occupation; and from these conditions has resulted the theory of yellow fever endemicity in the island of Cuba. Neglect of hygienic precautions, particularly of vaccination, would again render small-pox a permanent occupant of densely populated communities, but would not make it an endemic disease.

But the doctrine of yellow fever endemicty at New Orleans, besides being scientifically unsound, is ruinous to its commercial prosperity. The suicidal policy of a portion of our citizens in proclaiming to the world that their soil is incurably plague-stricken has no parallel in this country, nor probably in the whole world. Previous to 1858, when the fever prevailed annually and assumed epidemic proportions every 2 or 3 years, there was some excuse for assigning it a permanent habitation here; but, in view of the fact that for the last 21 years there have been only two general epidemics, and one or two years of total exemption, it is certainly time to offer every possible inducement for capital and population to come and abide with us.

(5.) The fatality of the north wind is easily prevented by protecting the patient from draughts and keeping his room warm by a good fire.

(7.) In the ordinary acceptation of the word *contagion*, we do not comprehend how yellow fever could be at the same time *contagious* and *endemic*: if contagious, it is communicated from

one person to another, through the medium of a *materies morbi* reproduced in the body of the first person; if endemic, it must be produced by a cause belonging to the locality.

We have already given reasons for rejecting the theory of endemicity, and we now add that the preponderance of testimony in New Orleans indicates that the specific poison of yellow fever is not reproduced in the human body, and therefore that it is not a contagious disease. Innumerable instances show that the introduction of yellow fever patients into hospitals in New Orleans is not followed by an outbreak among the previous inmates, until the disease has reached the neighborhood in its gradual march. Likewise it has been found that a person, having visited an infected locality, may sicken in a healthy locality without communicating the disease to others, unless he be accompanied by articles of a porous nature from the infected place; the inference from accumulated observations of this kind showing that the infection is conveyed by things rather than persons.

(8.) Undoubtedly Creoles would be quite likely to have the disease in infancy, provided it prevailed every year, and we presume most of them took it in this way formerly; but, in the interval between 1867 and 1878, thousands of children in New Orleans were not exposed to its influence; though, if the disease be endemic here, it is impossible to account for their escape so many years and their wholesale seizure in 1878.

(13.) We cannot assent to the proposition that the mortality is always higher among children. Previous to 1878, this was decidedly incorrect. When the disease was epidemic every two or three years, as was the case previous to 1858, few native children died of yellow fever, and it is probable that large numbers had it without its being recognized. The most unfavorable condition for children is difficulty of diagnosis and consequent loss of opportunity to gain a fair start in treatment, on which success is more dependent in this disease than in any other.

COMMENTS ON HIS OBSERVATIONS.

(3.) To one who accepts the endemicity of yellow fever, quarantine naturally appears useless. As we reject his major premise, we must also dissent from his conclusion.

As to the utility of inland quarantine, we must again disagree with Dr. Berjot. He properly observes that "there is no barrier for scourges which are wafted by the winds;" but we do not admit that yellow fever is so conveyed. Besides, we accept the assertion of the Yellow Fever Commission of 1878, that complete arrest of intercourse between infected and non-infected localities in every instance protected the latter.

(5.) Dr. Berjot offers the theory that yellow fever originates from noxious miasms, which are produced by an elevated temperature, conjoined with a low stage of water-courses; and that the fever spreads by transportation of these miasms on the winds. Universal observation shows that the disease is neither hastened nor retarded by winds, but spreads in all directions without regard to air-currents.

The above local conditions, to which Dr. Berjot attributes yellow fever, are precisely those which are universally recognized as the cause of malarial fevers, and which are found in their highest degree where yellow fever is unknown—in country localities rather than in cities and towns; while this fever is distinguished by its epidemic character and its partiality for dense populations, where malarial fevers are not usually prevalent, or may even be absent.

In what way the fevers of France and Spain confirm his notions about yellow fever, we are unable to discover. S. S. H.]

Another Light on Yellow Fever.

[The following article was transmitted to the National Board of Health, through the State Department at Washington. It is said to have been taken from the "Bien Publico" of Carupano.]

SYMPTOMS.

Heavy headache, severe pain in the loins and around the waist, strong fever, eyes red, evacuations neither frequent nor even little at a time.

APHORISMS.

1. Yellow fever does not exist, when the intestines are empty; they must be full or partly full.

2. If the case is taken in hand energetically within the first 24 hours, it is easily cured.

3. If the medicine is only administered after the expiration of the first 24 hours, the patient may die, but

4. If the treatment only commences after 48 hours, that is, on the third day, the patient will surely die, you may do what you will.

ADVICE.

Go at it quickly. As soon as you find the above symptoms, lose no time to take the following steps. There is absolutely no danger, if you should have mistaken the nature of the sickness.

TREATMENT.

Very simple.

1. Purgatives: Castor oil, 2 tablespoonsful; boiled sour lemon juice, 1 tablespoonful; powdered sugar, half a tablespoonful. This mixed forms a purgative, to be repeated every 4 hours, or every 5 hours in a mild case.

2. *Clysters* of linseed and caña fistula, given also every 4 hours.

3. Absolute diet the first day. The second day, in case the patient has evacuated much, the purgative is to be given less frequently, say once in every 10 hours. The same is to be done with the clyster. In case no evacuation should have taken place, the treatment of the first day must be continued.

Diet the second day—arrowroot, sago or maizena *without* any milk or egg whatsoever, to be given every 6 hours.

The purgatives must be continued until all fever ceases, even if it should take 4 days. A diet consisting of gruel and boiled sugar beverage with toasted bread must be continued 2 days after the disappearance of the fever.

Aphorism—A plate of soup or gruel, made with milk or egg, even when taken 24 hours after the fever has ceased, causes a relapse and the patient will surely die.

[In regard, first, to the symptoms, we would remark that the description is not precise enough to distinguish yellow fever from several other acute diseases.

"Pain in the loins and around the waist" is an obvservation

of this disease which practitioners in New Orleans have failed to record.

It is safe to say that yellow fever does not exist when the intestines are empty, for the intestines are never absolutely in that condition. But, if such a thing were possible, a certain prophylaxis against this disease would be within the reach of every one. Everybody would be safe, as long as he kept his bowels empty.

It is hardly worth while to comment on the author's ideas of yellow fever: they are so limited. He has observed the general benefit of early purgation and of a careful regimen in its management, and these two notions completely fill his mental horizon.

Such examples of limited capacity are not uncommon in other branches of knowledge than medicine. These people are never dangerous, unless they become profoundly impressed that they have an important mission; but they always make themselves ridiculous when they undertake to let their little light shine. S. S. H.]

Extra-uterine Pregnancy, Laparatomy after 12 Months' Recovery.

By Dr. F. HERFF, San Antonio, Texas.

Mrs. Pfeil, aged 24 years, German, very healthy and robust, applied to me shortly after her marriage in 1878, for treatment of dysmenorrhœa caused by stricture of the os, and chronic blenorrhœa of the mucus membrane of the uterus. After a prolongated treatment, the main features of which were, incision of the portis vaginalis with subsequent dilatation by pressed sponged and intrauterine applications of caustic and tinct. iodine, she recovered and nothing could be discovered of any anomaly, but a small tumor on the left side of the uterus, which was taken for an enlargened ovary. This gave her no pain whatever.

In January, 1879, she became pregnant and did as well as usual until 1st of April, when she was seized with abdominal

and sacral pains, hemorrhage and some fever. She was then living 30 miles off and treated by her physician for beginning abortion. Not finding any relief, she was brought to town for treatment.

On examination, the uterus was found to be of the size corresponding with her time of pregnancy, round and well defined, somewhat sore to the touch and on the left side an irregular and very painful hardness, which was taken for circumscribed peritonitis. The neck was normal, the os closed and the hemorrhage not very profuse. Hopes was therefore entertained, that the progress of abortion could be arrested and the use of the uterine sound was abstained from. The treatment was chiefly directed against the peritonitis' and consisted in mercurial ointment, poultices and free administration of opiates. In about ten days all bad symptoms had disappeared with exception of the hardness in the left side, which however had also diminished and was not painful.

I lost sight of her until end of October, when her husband informed me that his wife had been seized with labor pains at about the regular time for her delivery, but had only passed blood and a piece of membrane. Her labor then not progressing he had sent for a physician who pronounced everything right and expected the birth to take place very soon—but after repeated administrations of medicine had failed to bring it on. A few days afterwards the woman felt no more motion of the child, the breasts collapsed and repeated rigors with general malaise occurred. The doctor was called in again, pronounced the child dead and discovered by the use of the sound, that the uterus was empty and the pregnancy extra-uterine. I concurred in that opinion and advised the husband to keep his wife quiet in bed, and to bring her to town whenever any grave symptoms calling for active treatment, should occur. I would, of course, have advised laparatomy immediately, if the child had been alive, but thought, under the circumstances, this course the safest, and, as I believe, with the approval of the majority of obstetricians.

Three weeks afterwards the man reported his wife as being very ill with fever, severe pain in the whole abdomen and occa-

sional rigors, which made me advise him to bring her in for surgical treatment.

I had seen before this, two cases of extra-uterine gestation at San Antonio. In one case the correct diagnosis was made during the life of the fœtus and the operation proposed, but refused. The woman died eight or ten months afterwards in the country, from exhaustion by abscesses around the rectum and in the umbilical region by which pieces of the fœtus were discharged.

In the second case, the woman was seen only a few days before her death, which occurred under similar sufferings.

I resolved, therefore, not to trust nature in this case, and only regretted that I had not seen the woman before the death of the child, when I might have hoped to save both lives.

On December 6th, 1879, the patient was brought to town. I found her much emaciated, skin yellow, inclined to profuse perspiration, pulse 110, temperature 102, loss of appetite, pains all over the abdomen, but chiefly in the left side. A little bloody discharge looking like lochia and having small shreds of membrane in it, came through the dilated and gaping os uteri—the portio vaginalis was about ¾ inch long.

The sound entered the cavity about 3 inches and could be moved freely in all directions. Behind the portio vaginalis and corresponding to the Douglessian cul de sac, a soft spongy substance could be felt through the vaginal walls, which also could be easily felt through the rectum. The abdomen showed a large, very regular and rounded tumor, extending several inches above the umbilicus, which looked and felt exactly like the uterus at the end of pregnancy. Parts of the child could be felt through it, but not very distinctly, and it was somewhat sore to the touch. To the left of that tumor and gradually blending with, was an irregular and knotty mass of fœtal limbs, which seemed to lay very close to the external coverings almost like under the skin, and was very sore. Below both tumors, and a little above the os pubis, the empty uterus could be plainly felt and corresponded to the motions of the sound, which was inserted through the os and could be felt through

the walls on pressure, while it had no influence whatever on the two other tumors containing the fœtus.

My diagnosis was then:

Pregnancy, either in the fallopian tube, of that variety known as interstitial; or,

Pregnancy in a rudimentary horn of the uterus, disconnected with the cavity of the developed uterus, but having its own ovary and fallopian tube, and being unpregnated by semen entering the abdomen through the fallopian tube of the other side and unpregnating an ovum of the ovarium on the rudimentary organ.

In either case a partial rupture of the anomalous receptaculum fœti had taken place in April, happily without rupturing the membranes of the fœtus, by which the ovum escaped only partially, and was hereafter covered in part by normal uterine tissue, and in part by such a new formation as it occurs in uncomplicated cases of abdominal pregnancy. The spongy body in the vagina was taken for the placenta. The symptoms of abortion in April were simply caused by partial peritonitis and by the discharge of the decidua, which as everybody knows occurs in all extra-uterine pregnancies.

The operation was performed December 9th, in presence of Dr. De Boyet, of New York, Drs. Cupples, Carothers, Hadra, and John Herff, of San Antonio. It was altogether done according to Lister's plan, under spray and with antiseptic dressings, the mention of which fact will render it unnecessary to allude to it in the future description. After opening the peritoneum by an incision extending from 1 inch below the umbilicus to the pubis, a hard, bluish-looking round tumor appeared, looking so much like the uterus presenting in a Cæsarian operation, that my son and myself, who had witnessed that operation in Europe, were struck by it and expressed it at the time. The thickness of the walls of the tumor, which was now incised was nearly one inch at the part corresponding with the cut in the linea alba. It was very vascular, showed true uterine tissue, and a vessel had to be tied by silk ligature, of the diameter of the brachialis. Old adhesions cemented its anterior aspect with the parietal peritoneum, and were, of course, left

undisturbed. The cavity of the sac contained about one quart of discolored and puriform liquor amnii, the membranes were not recognizable, but the whole sac seemed to be covered with a creamy, purulent looking deposit. The head of the child lay in the left side, the placenta was inserted in the sacral region, the funiculus was small. Her weight six pounds, with not much maceration.

After removing the child the hand was inserted with great care, and all the liquor amnii removed and the cord tied close to its insertion. The nature of the sac was then clearly made out. It consisted on the right side and a few inches to the left side of the incision of true ¾ inch thick uterine tissue. To the left of that it was formed in front by a membrane varying from two to four millimetres in thickness. The cavity was smooth and regular in front, while in the back part and towards the left side it was very irregular and its walls seemed to consist of the viscera, glued together by plastic exudation. The welfare of the patient forbade to make the examination as thoroughly as it might have been done on the dissecting table, but I believe it is correct in the main points. After sponging the cavity well out with 3 per cent. cabol. acid solution, a large india-rubber drainage tube was inserted from the upper to the lower corner of the wound. Over it the incision was closed by 10 silver sutures including the sac and the abdominal walls. Before this was done the normal uterus was again examined with the sound and readily made out behind the pubis, with no connection between it and the fœtal sac. No shock and very little pain after the operation. Pulse 106, temperature 102°.

In the first three weeks the after treatment consisted chiefly in washing out the drainage tube twice—often three times a day—with carbolic acid, and sometimes hypermangan. potass. The first antiseptic dressing was removed six days after the operation together with the sutures, and from that time as often as the injections were made. This was rendered necessary by the very copious and fetid discharge, and was chiefly done under the management of my son, Dr. John Herff, who at-

tended very carefully and with scrupulous observance of antisepsis to the after treatment. He removed, 12 days after the operation the after-birth, which protruded as a very fœtid sausage-shaped convolution through the lower corner of the wound. The patient took food and stimulants freely and promised well, when on the 18th day a sudden change took place.

Rigors repeated for three successive days, cough, peach-colored sputa, pains in the chest and region of the liver, temperature varying between 102° and 104° and a very feeble pulse of 110–120 per min. Immediately after the first attack the wound ceased secreting, and the washing fluid returned through the drainage tube almost colorless. Her tongue remained clean and her appetite was never entirely gone, although some weeks afterwards a very tedious diarrhœa set in. Another source of suffering was a bed-sore on the sacrum, requiring daily dressing with vaseline and peruvian balsam. She never was delirious, but acted often like an hystericalperson, screaming and having spasmodic twistings of the face. The treatment consisted successively in the administration of salicylic acid, quinine, aconite against the fever, morphine occasionally to procure rest and against the troublesome cough. At one time, when she seemed to be very feeble, her pulse became weak and flickering, and those nervous twitchings and pseudo-hysterics appeared, she was very much relievedby the administration of musk. The diarrhœa yielded to opium and sugar of lead, and towards the close of her sickness, when nothing abnormal remained but a frequent pulse, she improved under digitalis.

I need not to say that great care was paid to her nutrition. I forgot to mention, that the examination of the lungs gave, as it is usual in such cases, only the symptoms of acute bronchitis, extending to the capillary branches; that neither dullness on percussion nor bronchial respiration nor crepitation was noticed, neither any signs of pleuritic trouble. Recovery took place gradually and slowly; the lung affection yielded first, the diarrhœa and bed-sore last. The high temperature of 102°–105° was observed only during the first two weeks of the pyæmia, while the frequency and feebleness of pulse lasted very much longer.

On the 26th of February her recovery was perfect, and except a little œdema of the feet from anæmia she exhibited no anomaly. She left for home and is now, according to the statement of her husband, perfectly well and able to do all the duties of a farmer's wife. Her menstruation has also returned. I regret very much that I have had no opportunity since to make an examination of abdomen and uterus, but shall do so on the first opportunity, and report anything interesting.

This case is remarkable for several reasons:

First, the peculiar seat of pregnancy. The fœtus was undoubtedly at first included by uterine tissue, which gave way on the 3d month of pregnancy—expelling a part of the ovum into the abdomen, while another part remained in the old place. I cannot explain this otherwise than by presuming either interstitial pregnancy (that is pregnancy within the uterine part of the tube)—or pregnancy occurring in a rudimentary horn of the uterus. I am in favor of the second hypothesis from the fact that the woman, before she ever was pregnant, had a swelling on the left side of the uterus, which was then considered ovarian, but which probably was nothing else than the rudimentary horn.

Cases of both kinds have come under observation, but as far as I know only post mortem. I am not acquainted with any cases of either variety having come to maturity, and still less after clear symptoms of rupture and peritonitis had set in, as in my case.

Finally her recovery after pyæmia, with lung affection of such a persistent character, is also an uncommon occurrence.

In regard to the condition of the organs during the supposed abortion, I am certain that what I thought to be the normal uterus, was either the distended horn or fallopian tube, while the painful induration was the rent in the sac, with partial expulsion of the ovum. If the sound could have been used, the true uterus would have certainly been found empty and not connected with the cavity containing the fœtus.

Current Medical Literature.

ON THE TOXIC ACTION OF SALICYLATE OF SODA.

This subject, though manifestly of extreme importance, has attracted comparatively little attention in England. On the Continent, however, several observers have lately recorded well-marked and unmistakable cases of subacute poisoning by salicylate of soda. Thus, in a record of 250 cases, Gatti (*Gazzetta degli Ospitali*, Feb. 29, 1880) witnessed unpleasant and even alarming symptoms in four. In one, the drug administered in doses of twelve grains every four hours, during a period of ten hours, caused drowsiness, deafness, and complete amaurosis; in another, subacute delirium; in a third, severe gastralgia; and in a fourth, well-marked dyspnœa. Petersen (*Deut. Med. Woch.*, Nos. 2, 3, 1877) mentions a case in which twenty-two grammes, administered in the space of six hours, induced disturbances both of respiration and circulation. But Gubler (*Journal de Pharmacie*, June, 1879) goes farther than either of these observers in his estimate of the toxic properties of both salicylic acid and its soda salt. According to him, they at times produce effects not inferior to those of an irritant poison. Among such he enumerates severe colic, copious diarrhœa, cyanosis, and collapse, with eventually ulceration of portions of the digestive tract. On the other hand, a long array of names may be quoted in support of conclusions, diametrically opposed to those of Petersen and Gubler. In this case, however, negative evidence is of comparatively little importance. The question at issue is not the possibility, but rather the frequency, or otherwise of salicylic intoxication. Of the fact of such having occurred, there is unfortunately no room for doubt; both clinical observation and physiological experiments having thoroughly established it. Chirone and Petrucci (*Commentario Clinico di Pisa*, January and February 1878) have demonstrated that salicylate of soda administered to animals first increases and diminishes the frequency of the respirations, while Buss and Kœler have shown that dogs and rabbits poisoned by it have died with the symptoms and *post mortem* signs of asphyxia. Considering the very extensive use of salicylate of soda as a therapeutic agent, it is important to have some ready means of watching its action on the system. Administered in medicinal doses, it can generally be readily detected in the urine within two hours of its ingestion. The best and most sensitive test of its presence is a few drops of perchloride of iron added to the urine in a test-tube. If salicylic acid be present, a bright violet colour, due to the formation of salicyluric acid, will at once be struck. This reaction is extremely

delicate, and may be relied on if one part in a million of the acid exists in the sample of urine. It being known that almost, if not all, the acid ingested is eliminated by the kidneys, its presence will be a more or less satisfactory proof that these organs are physiologically sound. Should it not appear, however, it is evidently either accumulating in the system, or is undergoing some abnormal decomposition by which its chemical characteristics are being essentially altered. Seeing, therefore, that the toxic effects of salicylate of soda may manifest themselves at any moment, and in any case, some general rules as regards its administration seem to be called for. Judging from their known physiological action, all salicylates should be given with considerable caution, in cases of either phthisis or of renal disease. Their employment should at once be stopped, or at least very carefully watched, whenever the characteristic appearances in the urine cannot readily be detected within two hours after ingestion of the medicine. The possibility of idiosyncrasy in certain individuals should always be borne in mind, together with the fact that salicylic acid itself is not unfrequently adulterated with carbolic acid. The importance of this latter fact is self-evident. After all, however, very little is as yet accurately known as regards the indications either for or against the use of salicylic acid and its salts. In such circumstances, therefore, the practitioner can do little more than study carefully and intelligently each case on its own merits, bearing in mind that, so far as at present observed, all untoward symptoms have quickly passed off, without having left any permanent ill effects.—*London Medical Record*, May 15.

THE ORIGIN AND COMPOSITION OF THE MAD-STONE.

Prof. CHAS. RICE, in Medical Record.

The fable of the "mad-stone" may be traced back to the earlier period of the middle age—a time when medical men first began to leave the old beaten track of therapeutics laid down by the earlier Greek and Arabian physicians, and to study and observe nature for themselves. Yet their steps upon this new ground were so feeble, and rational explanations of natural phenomena or newly observed fact were so difficult for them, that superstition for a long time afterward found a fruitful field for development. Not only were new facts discovered which were unintelligible, and therefore often misconstrued, but sometimes there were properties and virtues assigned to newly discovered substances which were in direct proportion to to the rarity of their occurrence or the singularity of their appearance. Among such rare substances may be counted the peculiar concretions which are sometimes found in some of the inner organs of animals, particularly those concretions which consist of mineral or inorganic matter. There can be no doubt that such concretions must have been known and observed

from the earliest times, yet, so far as I am aware, no written record of the observation of any such concretions exists in the ancient classical literature, nor have I met with any account of them in oriental literature before the thirteenth century A. D. The first notice that I am aware of exists in the work of Ibn Baithâr (died 1248 A. D.), On Simples, who gives a detailed but somewhat confused account of *bâdzahar*, which is our present word *bezoar*, and is without question the substance forming the subject of the above query. Ibn Baithâr, as he usually does, gives extracts from the works of his predecessors, and, among others, cites a passage from Aristotle which, however, must be a mistake, since the contents of the passage are of such a nature that they could not have been known at the time of Aristotle. At the end of the article he quotes Ibn Djâmi, who says that "the *animal* bezoar, or that which is found in the deer's heart, is better than the other kinds." He fails, however, to give a description of the latter, or to mention any vegetable or other bezoars.

Ibn Baithâr's description already characterizes the bezoar stone as being endowed with wonderful power as an antidote to poison, and ascribes to it the faculty of "attracting the poison of venomous animals."

The word *bezoar*, which has sometimes been written *bezoard*, *bazehard*, *bezaar*, etc., is originally derived from the Persian *bâd-i-zahr*, meaning "the wind or the breeze of poison," in the sense of "the wafting away of the poison," and therefore "an antidote to poison." The Persian word became *bâd-zahar* in classic Arabic, *bâdizahar* in modern Arabic, and *bâd-zehr* or *pân-zehr* in the Turkish.

I have stated above that the term *bezoar*, or rather *bâd zahar*, in the meaning of "a concretion found in animal organs," did not occur, so far as I am aware of, in any published work written before Ibn Baithâr's time. Yet the word was used long before him by Arabic and Persian authors in its original sense —"antidote to poison." Since Ibn Baithâr himself quotes from works of authors who had preceded him, the word must have acquired its double sense a considerable time before. After the term had once been misapplied to "bezoar-stones," and the notion of the efficacy of the latter, as antidotes to poison had once spread, the fable—as it happened with many other similar ones—took a firm hold among the ignorant classes, being handed down from one generation to another as a priceless family prescription, sometimes even accompanied by a veritable family bezoar-stone. The claims which were made for these stones centuries ago may even in our days still be read in modern literature, and it is really surprising with what unshaken confidence even some well-educated persons will adhere to a firm belief in their efficacy. These mad-stones are in our days principally used as a supposed infallible remedy for the bite of mad dogs, and naturally every application of such a

stone to a dog-bite, even if the latter would have been of itself harmless, is scored as an additional victory for the stone.

The subject scarcely deserves a more detailed treatment, except perhaps at the hands of those who wish to write a history of superstition and of "sympathetic cures." A large amount of literature is at their disposal in the works of the earlier writers on materia medica, such as Garcia ab Orta, Bontius, Acosta, Clusius, Nicolaus, Monardes, and many others.—*Louisville Medical News.*

THE TREATMENT OF CANCEROUS ULCERS, AND GROWTHS NOT REMOVABLE BY THE KNIFE.

By STEPHEN SMITH, A.M., M. D., Prof. Orthopædic Surgery, University Medical College; Surgeon to Bellevue Hospital, N. Y.

The Treatment of Cancerous and Cancroid Ulcers, and Growths not adapted for Removal by the Knife.

You will frequently be at a loss to decide as to the course of treatment to pursue in cases like the one before you. In fact, such cases are usually regarded as not amenable to any treatment, and are allowed to progress from bad to worse, until they terminate fatally. The results of such treatment are great personal discomfort, pain and misery, and a lingering death. That such cases may often be greatly benefited by treatment there can be no doubt.

This patient is suffering from a return of cancerous masses in the margins of the old cicatrix, which formed after the removal of a cancerous tumor from the breast, one year ago. Nodular masses appear at several points, while, at the upper angle of the scar, the surface is extensively ulcerated. Her general health is very good, and as yet there is no evidence that cancer has affected internal organs. It may, therefore, be considered a local disease, so far as we discuss methods of treatment.

In the first place, it is evident that this is not a case for removal with the knife. It might be possible to dissect out quite clearly the hard masses, but the ulcerated portion has a base firmly adherent to the deeper structures. An attempt to remove all the tissues involved at this point would be very dangerous, and hence would be an unjustifiable procedure. Shall the case, then, be left to the natural results of the reproductive and destructive process now in progress? I think not. Though we may not hope to cure, we may mitigate and relieve symptoms, and possibly retard the progress of the disease, at least so far as its local manifestations are concerned.

The treatment which I propose to pursue is the application of a caustic. This remedy, though all but discarded by surgeons in the treatment of cancer, has a place in the therapeutics of malignant diseases not yet accurately defined. It is

one of the destructive measures which we may resort to, having capacities limited only by the possibilities of its application. As ordinarily employed, its real virtues are not fairly nor adequately tested. We are advised, or rather permitted, by authorities to apply caustics to ulcerated cancerous surfaces, the growth being no longer amenable to the knife. That is, caustics are recommended, as a last resort, when the disease has taken such deep root that it is certain to prove fatal. If useful under such unfavorable circumstances, may they not be far more serviceable at an earlier period? In my experience, caustics judiciously selected, and thoroughly and persistently applied, give the best results of any method of treatment yet adopted.

But, instead of entering into a discussion of the general use of caustics in cancer, I shall limit my remarks to their application in the class of cases represented by this patient—viz: open or ulcerating cancerous growths not removable by the knife. The caustic which I shall select for this case is the anhydrous sulphate of zinc, which is the ordinary sulphate of zinc deprived of its water of crytalization by heat, and reduced to a fine powder. It may be used in the form of a powder sprinkled over the surface, or as a paste made with glycerine, or as a strong ointment. In any of these forms it is the most useful caustic which we have for open surfaces, and it is for the purpose of illustrating its uses that I have brought this case before you.

The employment of sulphate of zinc as a caustic first came to my knowledge through a publication of the late Prof. Simpson, of Edinburgh. At the time I read his article a case was in my ward at this hospital, which was well adapted to test its special virtues. The history of that case, and one or two others in which this caustic was used, will illustrate the methods of employing it, and the results which follow.

Before I detail those cases, I will apply the caustic to these cancerous formations, and notice some points made by Prof. Simpson. The forms that I may use are as follows: on the open surface I may apply the powder simply, or it may be made into a paste with glycerine, one ounce of the dried powder being used to one drachm of glycerine; or a caustic ointment may be formed with an ounce of the dried sulphate to two drachms of the axunge. Either of these preparations is useful on open surfaces. I have selected the powder because I found that it was the only one of these preparations ready for use. In dusting the powder over the surface, it should be so thickly applied as to cover the exposed tissues to the depth of an eighth of an inch or more. That it is not a painless caustic is evident from the complaints of the patient, but it is by no means as painful as many other caustics in popular use. The pain continues but a short time generally, and patients rarely hesitate about a reapplication. There is but slight tendency, as

you see, in the caustic to spread, and I readily control it by absorbing the surplus with cotton. After the caustic has been on the wound three or four hours, any liquid residue should be removed by a swab of cotton, and a hot poultice applied. It will require five or six days to separate and detach the slough. It is a feature of the action of this caustic that the slough is, for the most part, white, and is not offensive. If any diseased tissue remain at the bottom of the wound after the slough is completely removed, reapply the caustic as before; but if a healthy surface remains, apply a simple dressing, as balsam Peru.

It will occur to you that it may be as dangerous to reapply the caustic to the base of an ulcer situated over important parts as to attempt removal by dissection. But that is not true, especially when you are employing a caustic which may be applied so lightly as the powdered sulphate of zinc. By very lightly sprinkling the fine powder, the thinnest possible slough may be removed. An additional safe-guard is found in the local inflammatory action established by the caustic, which tends to protect underlying parts from injury.

In treating the hardened masses or nodules, we must not apply the powder itself, nor as made into an ointment or paste. For, though it may in these forms irritate the skin, it will not break the surface; that is, it will not act as a caustic where the ephithelium is entire. This peculiarity, says Prof. Simpson, "is at once an advantage and a disadvantage: an advantage in so far as it prevents all fear of the caustic ever unnecessarily affecting any of the healthy contiguous surfaces and parts, and renders its application and use far more simple and certain; and a disadvantage, because when we wish to apply it to a non-ulcerated structure, we must first remove the intervening epithelium by a small blister, or more effectually by the application of an alkaline or acid caustic." I have frequently experienced the advantages to which Prof. S. alludes, but never the disadvantages, because I find in another composition of the caustic an agent capable of destroying the skin. If the dried sulphate of zinc powder is mixed to a paste with the strong sulphuric acid, a caustic is produced of the greatest energy, and yet having all the good qualities of the other forms of the sulphate of zinc caustics. This preparation is an inert-appearing mass, resembling the plaster used by the masons, and will keep any desired length of time. For the reasons given, I select this caustic with which to treat the cancerous growth still covered with the integument. It is best applied with a stick or glass rod. In order to prevent pain, I will first apply the strong carbolic acid to the tumors as an anæsthetic. The surface immediately becomes white; serum is next effused, raising a distinct wheal, and now the local anæsthesia is complete. I will apply the caustic with this pointed stick, though

a small glass rod would be better. Dipping the end into the caustic, I make a series of lines, and cross them at short intervals, rubbing the caustic into the furrows until the whole thickness of the skin is charred along the furrows. This operation, you see, is comparitively painless. A poultice must now be applied, as in the former case, and in about a week the skin will separate. On the reapplication of the caustic the powder may be preferable to this form, owing to the necessity of penetrating to a slight depth.

In regard to the action of this caustic, I cannot do better than to summarize Prof. S.'s publication. He states that the part to which it is applied is rapidly destroyed to a depth corresponding to the thickness of the superimposed layer; the slough is of a white color, and separates usually on the fifth or sixth day, leaving behind it, when the whole morbid tissue is removed, a red, granulating, healthy, and rapidly citrazing wound. This slough shows no tendency to chemical or putrefactive decomposition, but is firm in texture, and free from taint or odor; the local inflammatory reaction around a sulphate of zinc eschar is generally light and transient; there is no marked effusion or swelling in the surrounding parts, except where the caustic was used in the neighborhood of loose cellular tissue; the general system is not affected by its absorption, nor are there any constitutional symptoms, however freely and lavishly it is used.

It must be apparent to you that we have, in the sulphate of zinc, a caustic which, in its various forms, is adapted to a great variety of conditions. Prof. Simpson sums up its advantages, as compared with other caustics, as follows: "1. Its powerful escharotic action; 2. The rapidity of its action; 3. Its great simplicity and manageableness; 4. Its facility of application; 5. Its non-tendency to deliquesce or spread; 6. Its perfect safety; 7. Its efficacy." He speaks hesitatingly as to the seventh statement, but adds that he has seen not only the surface of cancroid and cancerous ulcers speedily and perfectly excavated by its application, but the surrounding characteristic induration become at the same time rapidly absorbed, and the remaining wound very speedily cicatrizes. He also found epithelial or cancroid ulcer of the cervix uteri, under the local application of powdered sulphate of zinc, exfoliate its ulcerated surface, have its sanguineous and sero-purulent discharges arrested, the parts temporarily, if not permanently, healed, and the patient's health, and strength, and spirits restored, though, on first using the caustic, he believed the disease to be altogether beyond the reach of any remedial measure.—*The Medical Record*, Feb. 14.

DRUG SMOKING.

It is somewhat remarkable that although there are five or six methods by which medicines may be introduced into the

circulation, it is only recently that any other channel than those of the stomach and rectum has been generally selected. Even the practice of administering drugs per rectum has fallen into unmerited neglect, notwithstanding the distinguished therapeutist, Graves, used to show in his "Clinical Lectures" what advantages may be obtained by giving remedies in this way. As for administering medicines externally, through the medium of the skin, it has scarcely been thought of in modern times; yet, whoever is acquainted with the writings of the ancients must have been struck with the frequency with which they ordered certain drugs to be applied to the skin, in order to secure their constitutional effects upon the system. Virtually, therefore, there remain at the present time but two channels by which medicines are made to enter the system, namely, the stomach and the subcutaneous cellular tissue; and therefore it becomes a question whether the extensive and vascular surface offered by the bronchi and vesicles of the lungs might not be put into requisition for the administration of many drugs that are now nearly always given by the stomach. The less tissue intervening between the channel of introduction and the blood-vessels, the more rapid will be the absorption, the more intense the effect, and consequently the smaller will be the requisite dose. Considering, then, observes Dr. Thompson, the special arrangement of the blood-vessels in the lungs as so disposed that the interchange of gases should take place freely, with as little let and hinderance as possible, it might be fairly conjectured that absorption through the air passages would more closely approximate to the immediate introduction into the blood-vessel in rate of absorption and intensity of effect than any of the other modes of administration.

There are several ways in which medicine may be administered into the lungs—by inhalation with steam, as atomized fluids; by insufflation, or by fumigation with powders prepared so as to burn freely in the air, or, lastly, by smoking. The simplest and surest method is, in the opinion of Dr. Thompson, the use of paper soaked in a weak solution of nitre to make it burn continuously, and dipped afterwards in the tinctures or solutions of the drugs to be tested, the paper being rolled into cigarettes of uniform size. In order, however, to disguise the odor of burnt paper, a little tincture of tobacco is used, as in the following formula, which represents the basis of each cigarette:—Swedish filtering paper, size 4 in. by 2½ in.; potassæ nitratis, ½ gr.; tinct. tabaci, gtts. x.; olei anisi., gtts. ⅛ (tincture of tobacco made with 2½ ozs. of the leaf to a pint of spirit). A solution of any drug can then be prepared, and the paper having been floated through the solution, in a flat dish, when dry can be cut into a certain size, and the dose thus accurately measured. Opium was the first drug experimented with, and one-eighth of a grain of the drug the dose at first tried; but it was soon found that the effects produced by smoking this

quantity were too intense, and it was at last discovered that one-sixty-fourth of a grain of the extract of opium was sufficient for an initial dose. Cigarettes with this quantity of opium were smoked by Dr. Thompson and three other healthy men, and in a few minutes a decided effect of dizziness was produced. The cigarettes were smoked in the ordinary way, the smoke being partly rejected; but if the full effect of the dose be desired, the smoker should be instructed to expand the lungs with full inspiration and retain the smoke in the lungs. In the case of one healthy man the dose was increased to one-thirty-second of a grain of the extract, but this, together with the same dose of stramonium caused too much and too prolonged dizziness. Dr. Thompson cites several cases in which the smoking of these cigarettes appeared to have been followed by the most satisfactory results. In one case so small a dose as the two-hundredth of a grain of opium procured many hours of sleep, a result which far surpasses that obtained from the subcutaneous injection, a mode of administration which has hitherto been looked upon as likely to give the most concentrated results.

Such are the chief facts and recommendations contained in Dr. Thompson's paper, the highly suggestive character of which cannot, in our opinion, be overrated. We say this advisedly, for, unless we are too sanguine, several great advantages may in some cases result from smoking medicated cigarettes. "Drug Smoking" may secure the speedy and successful action of medicine in cases which its ordinary mode of administration has proved a failure. In asthma we may look forward to very good results from the smoking from certain drugs; for hitherto chloroform, stramonia, and the datura tatula have been almost the only drugs the inhalation of which has been generally employed in this disease. Even the fact of it furnishing a means of giving drugs in a convenient and agreeable form is a strong recommendation for drug-smoking. How many patients there are who would prefer smoking a cigarette to drinking a nauseous mixture or swallowing a bulky pill! Besides, as Dr. Thompson says, the few vapors that are on the list of the British Pharmacopœia are of modern date, and there is a total omission of any means for the pulmonary introduction of drugs from smoking. We, therefore, hope that Dr. Thompson and other observers will continue their investigations into this method of administering drugs, for it aims at making some of our standard medicines both more powerful, more efficacious, and more palatable than they are at present.—*Physician and Patient*, May.

THE THERAPEUTICAL VALUE OF NITRO-GLYCERINE.

A. W. Mayo Robson, F. R. C. S., of Leeds, writes as follows to the *British Medical Journal*, April 10th, 1880:—

During the last twelve months I have tried this remedy in

migraine, asthma, angina pectoris and epilepsy. In migraine, one or two drops of a one-per-cent solution produces, within a few minutes, a diminution of tension in the previously corded temporal artery, and relief of the pain, which in some cases does not return, but in others recurs when the physiological effects of the drug have passed off. As individuals are affected differently by nitro-glycerine, I always begin with one minim of the one-per-cent. solution, but sometimes find it necessary to increase the dose to three or four minims to produce the desired effect. In several cases of asthma it has relieved the breathing in a most remarkable manner; the cases in which it answers are such as would be relieved by amyl-nitrite, but its effects are more marked and the relief is more durable.

One case of severe asthma, occurring in a patient suffering from chronic renal mischief and mitral deficiency, is worth specially mentioning. I prescribed the one-per-cent. solution in the form of a minim to a drachm of water, and ordered two drachms to be taken every quarter of an hour till relief was obtained. My patient, however, had two large tablespoonfuls of the medicine given, instead of two teaspoonfuls. He said that the effect was wonderful; he thought his head was going to burst, but his breathing was effectually and permanently relieved, and that instantly. In this case amyl-nitrite, although inhaled in large doses on previous occasions, had given very little relief. Since that time, several months ago, he has been threatened over and over again with his old attacks, but a dose of the medicine always staves it off.

In angina pectoris the relief given by nitro-glycerine is most complete; but as several cases have been reported in the journals, I need only mention it. The relief in these cases is not simply temporary ease from pain, but if the remedy be given thrice daily in gradually increasing doses, beginning with one minim of the one-per-cent. solution and steadily advancing to eight minims, the attacks lessen both in frequency and intensity. One of my patients, who has suffered severely from angina, always carries a bottle of the medicine in his pocket, and he tells me that by taking a dose of five drops when he is threatened with an attack it is always prevented.

I am trying it in some cases of epilepsy; but as yet my observations are not sufficiently advanced to be worth relating. I cannot see why, if it relieve the vaso-motor spasms in other diseases, it should not also have the same tendency in this most distressing disease; and since its regular use in angina seems to be curative, I have hopes that here we may have a similar effect. Again, if the "aura" gave sufficient warning, it might be worth while to try if a good dose would prevent an attack.

I have not had a chance of trying it in sea-sickness, but should think it might do good; and it would certainly have this advantage over amyl-nitrite, that all the other occupants

of the cabin would not be compelled to inhale its fumes for some time afterward, which is the case if amyl-nitrite be used in the ordinary way, much to the annoyance of those who are well.—*Medical and Surg. Rep.*, May 8.

TRANSFUSION IN ANEMIA.

By E. A. De Cailhol, M. D., St. Louis, Mo.

In the beginning of June, 1879, I was requested to visit Mrs. S., aged 28, mother of three well-formed and healthy children. I found her a blonde, with blue eyes, lying on a lounge, looking prostrated, emaciated and very pale—in fact, her appearance was that of a wax figure. Her pulse was very weak. She had no appetite, and no strength at all. She could hardly answer any questions, and neither she nor her husband could furnish me any explanation in regard to the probable cause or causes of her present condition. All her confinements had been normal, without any extra loss of blood, but since the last, two years and a half ago, she had been constantly sinking. She told me that she was disgusted with the doctors, tired of taking medicine, and despairing of her condition. She added, further, that she would be glad to die.

I promptly diagonsed a case of extreme anemia, which diagnosis the microscopical examination of her blood fully confirmed. I prescribed first a tonic of quinia, iron and strychnia, to see whether by it I should be able to raise her appetite. After the first dose, however, I saw that her stomach would not tolerate any medicine. We unfortunately sometimes meet with such desperate cases in our practice, and they are undoubtedly difficult to cure.

Having in my last sojourn in France (1874,) had occasion to witness many wonderful cures made by the transfusion of blood, after the process of Dr. Moncoq, the great French specialist in transfusion, I concluded this time to try that means of treatment, which was in this case not only perfectly indicated, but had every prospect of success. All organs were sound except the stomach, but on account of that circumstance I decided to improve a little upon Dr. Moncoq's *modus operandi*.

The patient's husband was a strong, stout man of thirty-five years, without any syphilitic or scrofulous taint—in fact, a perfect subject to furnish blood suitable for transfusion. With the consent of all the parties, on the 6th of June, assisted by my intimate friends, Drs. Legrand and Jeru, of France, my guests at that time, I transfused only two ounces of non-defibrinated blood, taken from the basilic vein of the husband's right arm, into the patient's right arm, through the median basilic vein. My professional brethren will, I suppose, understand the choice of the arm knowing that the right, on account of its development by work, has its veins more prominent, and in an operation of this nature, little details are very important to secure success. As I ex-

pected, notwithstanding the small amount of blood transfused, the pulse was instantly raised, the patient felt warmer and more comfortable. I prescribed for the following day, rest and milk *ad libitum*. But I concluded also, in order to hurry up the case, to resort to my favorite process of rebuilding a patient, a process that I have employed for the last twenty one years, which is, when the patient's stomach is in a debilitated condition, and unable to retain and digest food, to employ rectal alimentation. As I have already said, I have extensively used that process, particularly in cases of the black vomit of yellow fever, cancer of the stomach, etc., etc. In such cases I have injected into the rectum a very rich *bouillon*, made with the best pieces of fresh beef and pork pancreas, with sometimes an addition, according to circumstances, of a tablespoonful of French cognac *(spiritus vini Gallici)* or cod liver oil. In this case I injected every three hours, warm, two ounces of defibrinated beef blood, and two ounces of the aforesaid *bouillon*. I had for this purpose all needed facilities, the family butcher killing his beeves not far from the patient's house.

Some of my readers may inquire why I *transfused non-defibrinated* human blood, and *injected defibrinated* animal blood. My answer is, that in the transfusion process, the assimilation is made at once, and the blood transfused *must not undergo any alteration*. According to Moncoq's numerous experiments defibrinated blood loses by the removal of its fibrine the best part of its constituents, and it is rendered not only less effective, but entirely unfit and even dangerous to the circulation. If the limits of this paper would admit, I would demonstrate that great truth by many remarkable illustrations.

The timid operator is impressed with the idea that the blood will, or may, coagulate during transfusion, and hence would result the stopping of the *hematophorus* (instrument for transfusion) or an embolas. No such thing ever takes place, if the surgeon is careful and expert, has everything ready at hand, is well assisted, and a suitable hematophorus, properly handled and not overheated, as blood clots quicker by heat than by cold. The surgeon must always bear in mind that he has from three to four minutes before him to transfuse the blood before clotting will take place, and this short time is always amply sufficient to transfuse, even in the *mediate* transfusion process, two ounces of blood and even more. In regard to the injections of the defibrinated animal blood, it is a different thing. Here the blood taken at the slaughter-house would not keep twenty-four hours, hence defibrinization is indispensable; also it is intended for food and not to go into circulation.

In writing this article I write solely for the benefit of the profession of the United States, and I would be glad to see it reproduced by other medical journals, my only purpose being to correct some wrong ideas that are prevalent regarding the

principal rules governing the operation of transfusion; an operation which is, after all, not in the least dangerous, and very easy to perform when well understood. It has always been a rule with me not to criticize any of the surgeons of this glorious and hospitable land in their attempt to improve anything coming from the other side of the Atlantic. I know they are practical and progressive men, but I cannot help candidly stating that this operation of transfusion has either been misunderstood or not studied enough in the United States. It is, when properly performed, an operation from which an immense amount of good may be derived.

In 1874, when I first landed in St. Louis, I introduced here Dr. Moncoq's process of transfusion, by demonstrating it for the first time on the late lamented General Frank P. Blair, then crushed with hemiplegia. I transfused that patient twice, but, unfortunately, under the worst circumstances possible. In this case, 1st, his real condition (softening of the brain) was concealed from me, for its true nature, as I knew it afterwards, contra-indicated transfusion. 2d. I had to deal with his family physician, who objected to my plan of treatment, which was to first freely bleed the patient in order to replace the affected blood withdrawn by healthy blood. However, in spite of all these disadvantages I had the satisfaction of seeing Blair improve, and live six months. Since that time, I have known of many attempts at transfusion being made in the United States, but I am sorry to say that very few, *not to say none at all*, have been made properly, and that this is the reason why they have proven in the majority of cases, unsuccessful. The operation has been performed when contra-indicated, or on the wrong place of the body, or with improper or imperfect instruments, or with defibrinated blood, or with woman's or animal's blood, or with milk, or after too much manipulation of the vein, or too quickly—all just so many causes of failure.

My estimable and intimate friend and colleague, Dr. Moncoq, in presenting me his remarkable work on transfusion, authorized me to translate it into English. This work is undoubtedly the most precise, clear and sensible ever written on this subject. All objections that might be raised by the timid operator are removed. All the indications are perfectly explained, with their rational reasons. Having always followed his rules, I have never met with any failure. At some future time, if my occupation will permit, I intend to translate this work for the benefit of the profession at large; but for the present, it must suffice that the blood to be transfused must be taken from a very healthy and very sound man, between twenty and forty years of age. None other must be used. The blood must not be defibrinated. It must be transfused slowly; not in a large stream or gush, lest the heart be taken by surprise.

It was really astonishing to see how rapidly under my treatment my patient, Mrs. S., improved. Of course, physiologi-

cally, in an anemic human body two ounces of rich, strong, healthy blood, produces the same effect, if I may be allowed the poor comparison, as seed planted in good soil, with this difference, that in the human body the multiplying process is incomparably more prompt and complete. On the 21st of June, I transfused another ounce and a half of blood, which gave again a very encouraging result. Patient told me that it seemed to her that I gave her new life. I then tried beef-tea and milk diet combined. Sometimes, on account of the acidity of the stomach, I added to the milk a little lime water. Sometimes a few grains of Boudault's pepsin were given, to help digestion. The stomach then commenced to gain strength, but I still continued the beef blood and bouillon injections through the rectum, though only every four or six hours. The nurse and husband were very much puzzled to see the patient's feces so natural, instead of blood-colored. An occasional microscopical examination of my patient's blood gave me the certainty of a constant increase of the red corpuscles; besides, her general appearance showed that she was decidedly gaining strength.

On the 8th of July I transfused for the last time, but with some difficulty, owing to her marked improvement. *One ounce only* of the husband's blood was transfused. Two days after, her stomach was able to digest chicken, and gradually, with the help of pepsine for a while, she was able to eat more substantial food and drink French wine (Bordeaux). Of course, at that period I stopped the rectal injections.

It is to be remarked in this case, that I never gave her any iron preparation during the whole treatment, and I firmly believe that the cure is due to the four and a half ounces of healthy blood transfused.

On the 15th of August, Mrs. S. started for Europe, and when she returned, last November, I could hardly recognize her, so plump and rosy were her cheeks.

2613 South Seventh Street.—*The Ohio Medical Recorder*, April, 1880.

INTERNAL URETHROTOMY—ALBUMINURIC SUBJECT—DEATH—POST-MORTEM REVELATIONS REGARDING MAISONNEUVE'S URETHROTOME.

Dr. Briddon presented the male genitals removed from the following case:

John Bradley, fifty-four years; brown skin; cook; widower; was admitted to the hospital department of the Colored Home, January 15, 1880. Family history unimportant; has been a hard drinker; had malaria when young, but no rheumatism; enjoyed good health until two years ago, when he began to suffer from headache, backache, and nausea; he then noticed gradually increasing swelling of the lower extremities; subse-

quently he had cough, with occassional expectoration of blood, and was annoyed with shortness of breath and palpitation of the heart; for some time he had experienced difficulty in emptying his bladder, the stream being very small and the desire to urinate occurring every hour during the night. At the time of his admission his urine contained thirty per cent. of albumen.

Physical examination—Heart.—Aortic valves close harshly; left side of chest much sunken in and almost motionless; percussion over right lung fair: left slightly dull over whole surface; right dull at apex posteriorly, otherwise normal; left respiratory murmur suppressed, except in interscapular space, where it is rude, dry, and moist. Rales heard over whole surface of lung.

Marked œdema of lower extremities.

Prostate normal; No. 1 olive-tipped soft bougie can with difficulty be introduced into the bladder, conveying the impression that a number of strictures existed in the penile portion of the urethra.

Diagnosis.—Old pleurisy, chronic renal congestion, urethral stricture, cystitis.

Jan. 5th.—Dr. Briddon expressed the opinion that there was no possible chance of amelioration of his bladder difficulties but through either cystotomy or urethrotomy, fully recognizing the danger of any operation in such a subject. Internal urethrotomy was done with Maisonneuve's instrument, and No. 30 French sound was passed into his bladder. On the 6th, he had suppression which lasted twelve hours, when the renal secretion was reëstablished, but the difficulty in his breathing increased and he died on the 9th, in a condition of uremic coma.

Autopsy, nineteen hours after death.—Body fairly nourished, œdematous; rigor mortis marked. Brain not examined. Heart hypertrophied; 22 ounces in systole; cavities filled with dark clots; aorta contained a few fatty patches: considerable serum in præcordial sac.

Lungs.—Right, in condition of hypostatic congestion; left, the pleural sack was filled with clear serum, compressing the lung upward and backward, being carnified. Liver amyloid, spleen normal, kidneys small, contracted, and granular.

Penis was opened along the dorsum: the mucous membrane was found incised along its inferior surface from the meatus to the bulbous portion.

In this connection Dr. Briddon referred to a specimen which he had presented some years ago to the Society, in which the same condition of the urethra had been found after operation with Maisonneuve's instrument. These are the only cases in which he had been able to demonstrate it. Death, in both cases, occurred from causes that could not be controlled. He had used the same instrument in a large number of cases in

which there was no kidney complication, and with the happiest results, but he had no doubt that if the urethras could have been examined, the same long incisions would have been found.—*The Medical Record*, March 6.

TREATMENT OF STERILITY.

At the meeting of the St. Louis Medical Society, held March 13th, a very interesting paper, illustrated by drawings, upon the treatment of sterility dependent upon endocervicitis and endometritis was read by Dr. A. C. Bernays. The treatment which is advocated he attributed to Dr. G. Simon. The reader held that sterility, and the dysmenorrhœa depending upon it, belonged as much to the domain of surgery as stricture of the urethra or fissure of the anus; that the swollen condition of the mucous membrane of the cervix caused a stricture of the neck, and this stricture was the cause of dysmenorrhœa and sterility.

The operation by which he proposed to cure this stricture is as follows: The patient is placed in the lithotomy position; the neck is split by incisions similar to those made in Sims' bilateral incisions. Now, it has been found that this procedure temporarily cures the leucorrhœa, but that the cut surfaces reunite, and the condition of the patient becomes worse than it was before. In order to prevent this, another step is necessary, namely, a wedge-shaped piece is cut from the anterior and posterior vaginal surfaces of the neck, the cuts running at right angles to the long axis of the uterus, and the base of the wedge being external; the surfaces of these wedge-like cuts are brought together by sutures, thus prying open the split cervix and exposing to view the internal os.

Dr. Bernays has performed the operation seventeen times. Up to December, 1879, he had treated fourteen cases in this way, and in regard to these was ready to give results: Five of the patients became pregnant, and three of them have been delivered. Of these five, two had been barren between six and seven years, one five years, and the other two between three and four years. The nine others, though they remain barren, have been relieved of their leucorrhœa.—*Boston Medical and Surgical Journal*, April 1.

THE RIGHTS OF PROPERTY IN THE BODIES OF THE DEAD.

A suit was recently tried in the Superior Court of this city before Judge Harmon and a jury, in which the plaintiff, Mrs. Ann Farley, claimed to recover $5000 from Dr. Wm. Carson, one of the medical staff of the Cincinnati Hospital, for operating with a dissecting knife upon the corpse of her husband without her consent or that of her children. (The man, a charity patient, had been under treatment for hepatic abscess.) It

was claimed for the defense that the body was not cut for the purpose of a post-mortem examination, or for dissecting purposes, but to relieve it of a large accumulation of pus.

After the close of the evidence for the plaintiff, Mr. Herron, of counsel for defendant, moved the court to arrest the case from the jury on the ground that the testimony did not establish the allegations of the petition; that in fact there was but one incision made and also that it was made before death. Supposing, however, that the act was after death, there was no violation of any legal right, and no cause of action could accrue.

As the question is one of a somewhat novel character and the decision of peculiar interest to the medical profession, we publish the following full abstract, as given in the court reports of the daily press:

Judge Harmon, in passing on the motion, said: The plaintiff sues for damages by reason of the defendant having, as she alleges, made an incision in the body of her deceased husband, who died at the Cincinnati Hospital, of which the defendant was a member of the medical staff. At the close of the plaintiff's testimony the defendant now moves to arrest the case from the jury, and render judgment for the defendant; first, because the testimony failed to establish the allegations of the petition, and secondly, because if it did, the plaintiff would not in law be entitled to a verdict.

The motion, so far as the first ground is concerned, is overruled, because, while the court may not be satisfied the evidence sustains the petition, yet, as there is testimony on the subject, it is for the jury, and not the court, to weigh it under the practice in Ohio.

The second ground presents a question entirely new. Counsel on both sides confessed their inability to find authorities after diligent search, and though the court has spent the noon recess in search, it had failed to find anything directly in point.

The question simply is this: Has a widow such a right in the body of her deceased husband that she may have an action for damages against any one who injures the body? All the cases that can be found seem to relate to rights of relatives after burial. In all of them it seems to be conceded that there is no right of property in the bodies of the dead, although there is in the garments and ornaments. This was the common law. (2 Blackstone, 429.) The case of Pearce vs. The Cemetery, 10 Rhode Island, 229, an action for injunction, while admitting that there was no right of property, the court said, that for the purposes of interference by a court of equity, there was a *quasi* property in the relatives of deceased in the body. The object of an action of this kind is to recover pecuniary damages. There certainly can be in such case no actual damages, and in fact the only damage claimed here is injury to the plaintiff's feelings by interference with what she considered the

proper religious observance over the dead body of her husband by reason of its mutilation. The court knew of no case in which an action was permitted merely for injury to feelings. In some classes of cases it was permitted as enhancing damages to personal reputation. The common law is liberal in granting actions where no actual injury is involved, for the purpose of vindicating personal right. If one lay his hand upon another, although there was no conceivable injury, the party could have his action for nominal damages, so careful is the law to protect the security of the person. But these are all actions where the right is undoubted and unquestioned. The maxim *de minimis non curat lex* does not apply to such actions. But here the right is at least questioned, and in the opinion of the court there is no right at all; and, therefore, there being no real pecuniary injury, no action can be maintained. It is not for every injury the law gives an action. There is a class of wrongs known under the title *damna absque injuria*, where there is a wrong, but no invasion of a recognized legal right. This is one of those actions. And admitting, for the purpose of this motion, that there is testimony to show that the defendant injured the body of the deceased, it is an injury for which the law gives no redress in money damages.

It seems that the protection of the dead is recognized rather as the duty of society than of individuals, and there has been legislation of various kinds in Ohio and other States to protect the dead from desecration. There is no reason, even on the plaintiff's own theory, why she should have an action rather than the children of the deceased, or his brothers and sisters, or parents, if living. Their feelings are as open to injury as hers, and in fact, the authorities referred to, in referring to the duties of Coroners, recognize the principle that the interests intended to be secured are those of the relatives as a body, and not the interest of any particular ones.

Much as the interest of the plaintiff must be respected in the devotion which she shows to the memory of her husband, this is no case in which she has suffered an injury in any conceivable aspect, for which the law is authorized to take money from the defendant. The Court was the more willing to come to this conclusion, because the evidence fails to disclose that whatever was done, even if done after death, which defendant denies, was done with any improper motive or wantonly, but was done with the best of motives. Motion granted, and judgment for defendant.

W. A. Cotter for plaintiff; L. W. Irwin and J. W. Herron for defendant.—*Cincinnati Lancet and Clinic.*

SECOND ATTACK OF CONSTITUTIONAL SYPHILIS.

Two cases reported at a meeting of the Medico-Chirurgical Society of Louisville, March 5, 1880, by L. P. Yandell, M. D., and James M. Holloway, M. D.:

Dr. Yandell: A gentleman came to me two years ago in a cachectic condition, suffering from numerous and severe manifestations of secondary syphilis. He was a man of strumous diathesis and a victim of malarial poisoning. Under quinine, iron, cod-liver oil, and malt, together with the moist mercurial vapor baths, he was, within a few months, entirely cured. His perfect recovery, when the condition described is considered (and I state further that he was beyond fifty years old), is rather remarkable. During the two following years he had no relapse—no syphilitic manifestation, though he often required iron, quinine, and sometimes the constructives. He got a prolonged course of iodide of potash after the baths.

A few months since he again consulted me for what his family physician considered *herpes*, but on pushing back the prepuce a semilunar, gristly induration, immediately behind the top of the glans penis, demonstrated that he was the victim of an indurated chancre. Under the same treatment that was used in the first instance, he is rapidly recovering. In something more than twenty years' practice, this is the first instance in which I have seen a second indurated chancre in the same individual: the first instance, at least, in which there is no possibility of mistake. If my memory serves me right, Mr. Jonathan Hutchinson, of London, told me he had seen several cases, and I have it in black and white from Ricord, in a note written to me some years since, that he has seen several cases of the kind.

Dr. Holloway: Three years ago a colored man, aged fifty-eight years, attended the surgical clinic at the Hospital College, and was treated during an entire year for consecutive syphilis. The students had an oppertunity to observe in his case almost all of the consecutive manifestations of the disease upon the mucous and cutaneous membranes, and not a few upon the bones and nervous system and lymphatic system. Under a persistent mercurial treatment (internally), followed by iodide of potash, the patient, though advanced in years, slowly recovered. While he was under treatment his wife was also a dispensary patient with the same disease, as was also his son, aged about eighteen years. The notes of my lectures during this time, taken by the advanced students, abound in references to these cases, especially that of the old man. He was otherwise healthy—free from the strumous and malarial complications referred to by Dr. Yandell. After his recovery he visited the dispensary frequently upon his own account, but oftener to introduce other patients. On these occasions his case was cited as a probable recovery from constitutional syphilis.

Last winter this man presented himself again for inspection, and upon a careful and thorough examination was proved to be the possessor of an indurated, split-pea-like chancre, which was located upon the preputial mucous membrane, near the corona

glandis. The mucous membrane of the glans and prepuce and a narrow circle of the contiguous skin were free from pigment, rendering the appearance of the chancre identical with those of a white man. The inguinal lymphatics were symmetrically enlarged and painless.

This patient was given a mercurial course (calomel and opium internally), and directed to keep the sore dry and clean. After three weeks the chancre had disappeared. There had been no secondary symptoms three months after.

These cases prove either that one attack of constitutional syphilis does not give immunity from a second attack, or that the disease is curable. I entertain the latter opinion.

Such cases should be brought prominently before the profession. Frequently well-informed practitioners express doubts as to the curability of syphilis, and much oftener do I hear similar doubts expressed by non-professional persons. I not only believe firmly in the curability of syphilis by appropriate and judicious medication, but I have almost conclusive evidence that the disease is occasionally recovered from without any treatment whatever further than that denominated hygienic.—*Louisville Medical News*, May 22.

CRUDE PETROLEUM IN ASTHMA.

M. M. Griffith, M. D., in the Medical Record:

It is a well-known fact that many of our most valuable medicines have been borrowed or developed from general impressions or the prevailing prejudice of the common people in some district or country. Jenner deduced an important scientific truth from the vague notions and common prejudice of the dairymen of Gloucestershire. In like manner has it been with many of the important remedies of the now extensive materia medica, which have often been in use by the common people before being investigated by the profession.

Pursuing this line of observation, we find the veterinary surgeons, farmers, and horse-jockeys now prescribing the ordinary crude petroleum as a remedy for broken wind and heaves in horses, and with astonishing success, improving the general condition of the animal, giving him a fine appearance, and removing the difficulty of breathing as if by magic; a cure which they are willing to swear is permanent, which assertion I accept with several grains of allowance. Heaves and broken wind I have always looked upon as due to emphysema, and consequently treatment must necessarily be only palliative. Crude petroleum is a stimulating antispasmodic expectorant and diaphoretic of no mean power. It seems to act by stimulating the secretions generally, especially those of the skin, and improving the digestive functions. The dose for the horse is one teaspoonful, in meal, placed well back upon the tongue two or three times a day, continued until relief is afforded.

Having seen the beneficial effects of this remedy frequently applied to the horse, I was led to experiment upon that difficult disease to cure, asthma. I used the ordinary oil in various combinations, as in syrups, emulsions, etc.; but however it might be combined, I found that it always produced a disagreeable eructation, and it was hard to induce patients to persevere in its continuance. But the semi-solid oil that accumulates on the tubing and casings of the wells, and hardens to the consistency of putty, made into pills of five grains by incorporating with some inert vegetable powder, taken every three or four hours, has afforded almost instant relief. The paroxysms will not return under its usage. It is not curative, but the patient does not suffer while taking the pills, and after a few days the spasmodic symptoms seem to pass off. Many asthmatics are affected only in the spring or fall, and after these attacks pass off they are comparatively comfortable. Nothing has afforded me as much relief in the treatment of hay fever, autumnal catarrh, or asthmatic bronchitis as these pills. The cough and dyspnea are promptly alleviated.

I have already called the attention of the profession to the value of this remedy in pulmonary tuberculosis.—*Louisville Medical News.*

MELDON ON INTRAVENEOUS INJECTION OF MILK.

In addition to five cases already published, details of which Mr. Austin Meldon, of Dublin, will be happy to forward to any one interested in the subject, short notes of three other cases are to be found in the *Lancet*, January, 1880, p. 76. M. C., aged 70, had four-and-a-half ounces of goat's milk, at 100° Fahr., injected when in a hopeless condition from pernicious anæmia, complicated with chronic eczema. In twelve days she returned home cured. M. W., dying from spinal disease and phthisical diarrhœa, was, in a week after the injection, able to be removed home much improved in health. L. N., in the last stage of phthisis, reduced to the utmost with hectic and diarrhœa, was greatly improved in health, the diarrhœa being cured for three weeks. At page 527 the case of M. M., aged 40, is given in more detail. Three and a half ounces of goat's milk were injected in May, 1879, when his friends were daily expecting his death. Relief was immediate, and in six weeks he was able to resume his work as a pawnbroker's assistant. In November, 1879, a relapse followed, and by January his condition was apparently hopeless, when the milk injection was again given with speedy relief to all the urgent symptoms. Mr. Meldon has now used this means in ten cases, all moribund: four are permanently cured; in the others life was considerably prolonged.—*London Med. Rec.*

A CASE OF DEATH FROM OVER-DOSE OF EMPIRICISM.

(Reported for the Michigan Medical News by S. V. C., M. D., Chicago.)

Fortified with classic knowledge, crammed with scientific lore;
Pierian drinking in his college made him thirstier for more.
Heads or tails for a profession, staked his choice upon a toss:
Pluto helped the bad selection, law and gospel suffered loss.

Straightway sailed he into physic, causing junior professors to stare,
For his progress made them dizzy with the speed he passed each chair.
Bagatelle were bones and muscles, chemics and histology;
One book he found helped many puzzles: Emmett's Gynæcology.

But his last year was a stumper, and he fain would hold his wits
With an alcoholic bumber; oft he had despondent fits,
O'er the therapeutic flatus of mildewed "authorities."
Parrot-like he crammed till he was threatened with tympanites.

Lured by shades of Francis Bacon, Priestly, Hunter, Vesal, he
Two first years had blindly pressed on, winning laurels easily.
Feeling in his bones that he could lift his patients into health
With Legendre or his Euclid, gain their thanks and earn great wealth.

Drilled with care in mathematics, not a doubt had dimmed his bliss,
But that cube roots and rheumatics, conic parts and syphilis:
Calomel and logarithms; physics and phlebotomy,
In the third year's explanations, formed one loving family.

When he lifted Wood, his practice, Watson, Ziemssen, Seguin, Beard,
Flint, the senior (of empirics), agony his eye-balls seared.
"Pigs on fucus, here are fattened," in an Irish book he read,
Then it was our student flattened—when they found him, he was dead.

(These lines were suggested by the sudden demise of a scientific medical student, who, during his literary course, had always claimed that medicine was not properly studied, and that mathematical and scientific principles could be applied to the cure of diseases.)—*Michigan Medical News*, May 10.

SULPHIDE OF CALCIUM IN THE TREATMENT OF SUPPURATING BUBOES.

Dr. Fessenden N. Otis, in the *N. Y. Medical Journal* for May, inst., mentions the sulphide of calcium as a remedy in suppurating bubo. Referring to the statements made for the remedy by Ringer, he says:

"Opportunity for a practical test of these claims soon occurred, and resulted in my own personal conviction of their entire correctness, and I have now for the last five years habitually prescribed the sulphide of calcium in cases of threatened suppuration in phlegmonous swellings from various causes, and, as a rule, with very gratifying results. The manner of its use was practically the same as advised by Dr. Ringer, viz., 1–12 grain of the sulphide of calcium every two hours, or 1–20 grain every hour during the day and up to the time of retiring.

Especially have I found small doses of the sulphide of calcium useful in arresting the progress of furuncular swellings and abscesses, and in preventing their occurrence when threatening. On the other hand, I have repeatedly tested the influence of this drug upon the suppurative processes in mucous membranes, as in gonorrhœa, gleet, leucorrhœa, etc., without being able to discover that it influenced or modified the suppurative process in such cases in the least degree.

Among the cases in my private practice where prompt arrest of suppuration was quickly followed by absorption of pus already formed and resolution of the tumor, and apparently from the use of the sulphide of calcium, were several inguinal buboes associated with chancroid. The simple fact that resolution occurred in these cases was (in accordance with the popular teaching) accepted as proof that the buboes were of sympathetic and not of chancroidal origin.

Authorities have long taught that, once the virus from a chancroid has been carried along a lymphatic vessel and deposited in the adjacent lymphatic gland, inflammation is at once set up in the substance of the gland. This, it is claimed, goes steadily on in spite of all and any treatment until an abscess is formed. This must, sooner or later, through advance of the suppurative agency or by surgical interference, result in an open ulcer, the pus of which will possess the same vicious character as the chancroid from which it was derived. This variety of bubo is known as the virulent or chancroidal bubo. The suppuration of such buboes has been considered inevitable, and all buboes not pursuing this course have been set down as not of true chancroidal but of simple or sympathetic origin. Inflammatory lymphatic enlargements associated with chancroid are very naturally dreaded as most likely to prove by results to be of chancroidal origin, and usually, after a few feeble attempts at treatment with a view to their resolution, glands so affected are encouraged to suppurate, and prompt incision and evacuation of pus are advised as soon as the slightest true fluctuation is recognized. If suppuration is indeed inevitable, undoubtedly it is wise to encourage it, to evacuate the virulent product at the earliest moment, and thus afford access for efficient treatment for the destruction of this new-formed chancroid. For this reason I had been an earnest advocate for early incision into suppurating buboes associated with chancroid. My experience in the few cases above alluded to, however, made me incline to the belief that a thorough and extended trial of the calcium sulphide in cases of inflammatory buboes associated with chancroid might give such results as to make its use imperative in every such case.

In order to gain further light on this important matter a systematic use of the calcium sulphide was made, in my service at Charity Hospital, in eighteen consecutive cases of inflammatory bubo occurring with, or as the immediate sequel of,

well pronounced chancroid. All the facts considered of importance were noted by myself and under my direction by Dr. Johnson, my house surgeon, and carefully tabulated.

Thus it will be seen (in the table published) that out of eighteen cases of inflammatory bubo presenting the rational evidences of chancroidal origin, and treated systematically by the use of small doses of the sulphide of calcium, resolution occurred in fifteen, and that in only three cases was incision ultimately required.

If we apply to these cases the usual rule that chancroidal buboes always eventuate in chancroidal abscesses, always suppurate and require evacuation by natural means or surgical procedure, then we must hold that only three out of fifteen cases of inflammatory buboes associated with chancroid were the result of transference of the suppurative process from the chancroid to the adjacent lymphatic gland. It is just possible, however, that the influence of the sulphide of calcium may, in arresting suppuration, extend to the true chancroidal bubo. The apparent successful use of this drug in the series of cases herewith presented at least suggests and invites a trial of its efficacy in all instances of threatened glandular suppuration, whether associated with chancroid or purely sympathetic origin."—*Michigan Medical News.*

BARKER ON NEPHRECTOMY.

Mr. Barker (*Lancet*, March, 1880, p. 402), in a paper read before the Royal Medical and Chirurgical Society, brought forward twenty-eight cases, home and foreign, in which a kidney had been removed. Fourteen recovered, fourteen died. A careful examination of all cases convinced the author that nephrectomy is not accompanied by any peculiar shock or risks apart from those attending grave operations; also, that it is well borne in many cases; and that, as an operation, it has a most useful future before it, when we have learned to select proper cases, and have better studied the operation itself. In some cases the lumbar, and in others the ventral operation, appears most desirable. In a case at the University College Hospital, operated on December 22d, 1879, the patient, a woman, aged 21, had long suffered from a movable encephaloid kidney. Constant hæmaturia was sapping her strength, and hence the operation was undertaken. The same incisions, etc., were adopted as in antiseptic ovariotomy, and the diseased organ easily removed. Twenty-four hours later she was as strong as before the operation; eight hours later she began to get weak, and died at the end of the second day from pulmonary thrombosis. An instructive discussion followed the reading of the paper.—*London Med. Rec.*

TREATMENT OF POST PARTUM HÆMORRHAGE BY HOT WATER INJECTIONS.

Dr. Atthill, in the Annual Report of the Rotunda Hospital, published in the *Dublin Journal of Medical Science*, December, 1879, writes on this subject. "The use of hot water in the treatment of this complication was very frequently employed both in the hospital and extern maternity, and has proved eminently satisfactory. It has, indeed, much to recommend it, for not only is it a powerful hæmostatic and excitant of uterine contraction, but it is also a general stimulant. If used with ordinary care it is not only harmless but beneficial, by thoroughly cleansing the uterus from clots, portions of membrane, etc., which may have been left in its cavity." It will not, in Dr. Atthill's opinion, be found altogether to displace the use either of cold water or of the perchloride of iron, but rather to be applicable to a distinct class of cases in which the former of those remedies would be unsuitable, and the latter unnecessary. The method of carrying out the practice is exceedingly simple. An ordinary syphon syringe is the only instrument required, though one with a long vulcanite nozzle, specially constructed for vaginal and intra-uterine injection, is now used. This is carried up to the fundus, and with the usual precautions against injecting air and securing a free return, water is injected as hot as can be conveniently borne by the hand, *i. e.*, about 112 deg. Fahr., in a full stream into the cavity, continuing this until a good contraction is secured, and the water returns quite clear and colorless. The following are some of the results of the experiences in the use of hot water. 1. In case of sudden and violent hæmorrhage in a strong and plethoric woman, it is better first to use cold. 2. Where, from the prolonged or injudicious use of cold, the patient is found shivering and depressed, the beneficial effect of injecting hot water is rapid and remarkable. 3. In nervous, depressed, and anæmic women, hot water may at once be injected without previously using cold. 4. In cases of abortion where, from uterine inertia, the ovum, although separated from the uterine wall, is wholly or in part retained, the injection of hot water is generally followed by most satisfactory results. 5. Where the injection of the perchloride of iron is considered necessary, previous injection of hot water clears the uterus of clots, etc., permitting the fluid to come in contact with the bleeding surface, and lessening the chance of septic absorption.—*London Medical Record.*

INFLUENCE ON THE REFRACTION OF FOUR YEARS OF COLLEGE LIFE.

Dr. Hasket Derby reports (*Transactions of the American Ophthalmological Society*) that in the year 1875, he commenced a systematic examination of the eyes of all students entering

the Amherst College. Every facility was afforded by the authorities of the college, and the attendance of the students was made obligatory. The average age of the students at entrance, was 21. The examination was by means of test-glasses and types. Half a dioptric was the smallest degree of ametropia taken into account. The new students examined during four successive years numbered 321. These comprised, at the time of entry 45 per cent. emmetropes, 20 per cent. hypermetropes, 35 per cent. myopes. In 1879, the first batch of students, having completed their course of four years, were re-examined. In 10 per cent. of these, a myopia had developed from a previous emmetropia; in 21 per cent. a previous myopia had increased in degree; in 16 per cent. a previous myopia remained unchanged. A full report, when the students of several successive years have been re-examined, is promised.—*Lon. Med. Rec.*

CASE OF CONGENITAL UNILATERAL TOTAL COLOR-BLINDNESS

The case is reported in the *Centralblatt für Praktische Heilkunde*. The difference between the two eyes was noticed by the child itself when three years old. At seventeen years of age, the girl was very completely examined as to the retinal function by Becker and Kirchoff. Acuity of vision was normal in both eyes. The right recognised all shades of color correctly, the left recognised none, but saw all as shades of grey. The perception of solidity in stereoscopic pictures was present in high degree. The perception of differences of illumination was a little inferior in the color-blind to that in the normal eye. One maternal uncle was an artist, reputed as a colorist; another was color-blind.—*London Medical Record.*

PETROLEUM IN PULMONARY COMPLAINTS.

In the Academy of Rome, Italy, Dr. Galassi, the President, read an interesting article on the action of petroleum on the air passages. In 1871, he had observed the benefit of inhaling kerosene in two of his own children suffering with whooping cough. The disease was completely cured in seven or eight days. The kerosene was respired three hours each day. He referred to a servant who suffered with continued colds and persistent catarrhs, but who, by inhaling kerosene oil, while cleaning a large number of lamps, was cured. He had, from his experience, great faith in the reports of Dr. Boucher, who had written on the subject, and who stated that a refiner of petroleum, and many of his workmen, suffering with pulmonary complaints, had become entirely well, robust and vigorous. As to its cure of phthisis, time only can tell whether petroleum will avail or not.—*Journal d'Hygiene.—Virginia Medical Monthly.*

LITHOLAPAXY.

[Dr. Edward L. Keyes contributes a practical article on this subject to the *Annals of the Anatomical and Surgical Society*, from which the following extracts are taken:]

The conclusions to which my experience in litholapaxy have thus far led me, are roughly as follows: I state them briefly as general conclusions which future experience may modify.

1. Litholapaxy is applicable to all stones in the adult capable of being broken by an instrument which can pass the urethra. Multiple stone is rather an advantage than otherwise where there is much calculous material.

2. Stricture does not contra-indicate the operation. If near the meatus it may be cut at the time of crushing the stone. If deeper it should be cut or stretched by preparatory treatment.

3. Prostatic hypertrophy is no bar to the operation, so long as solid instruments of reasonable size can be made to enter the bladder without the use of force.

4. Age is no bar to the operation.

5. Inflammatory conditions of the bladder do not contra-indicate the operation, although, undoubtedly, a reasonably healthy bladder furnishes a better field.

6. Chronic Bright's disease, heart disease and general debility do not so seriously contra-indicate this operation as they do others upon the urinary tract and may be almost disregarded, unless so far advanced as to make any other surgical manœuvre upon another part of the body undesirable. Preëxisting pyelitis is the gravest complication which can (immediately) compromise the success of the operation.

7. The operation should not be undertaken without a large previous experience upon the dead body or a small experience upon the living subject with old-fashioned slow lithrotrity without ether.

8. A lithotrite which cannot be made to clog, will not readily catch the bladder, and is as small as will satisfy the requirements of the stone as to size and hardness is desirable. The tubes may be straight or curved as large as the urethra will admit comfortably, after cutting the meatus if necessary, and any efficient washing bottle can be used which may suit the operator's fancy, if it be a bottle which will not allow air, which may have accidentally entered the bladder, to remain there.

9. A surgeon should not undertake the operation unless he feels confident that he can recognize the fact at once if he catches the bladder, so that he may drop the fold of mucous membrane immediately without bruising it.*

* * * * * * * * * *

* The lecturer here demonstrated upon the cadaver the ease with which the bladder may be picked up in the jaws of the lithotrite, succeeding without difficulty in catching the bladder with Bigelow's lithotrite, with his own instrument and with other instruments. He believed the bladder of a dead man to be no more loose and flabby than the atonied bladder of a live old man with a large prostrate.

Preparatory Treatment.—I think it better in all cases where inflammatory symptoms are at all active, that the patient should rest in bed for a few days before the operation is undertaken, drinking freely of Bethesda or Poland water, or taking a milk diet with a little of some bland alkaline diuretic, such as the citrate of potash.

If the urine be acid and reasonably clear, this is all the preparatory treatment required. Should the urine be ammoniacal, putrid, highly purulent, especially if atony of the bladder coexists with decomposition of the urine, the bladder should be washed out once or twice a day with a strong solution of borax in hot water, a tablespoonful (more or less according to the patient's sensibilities,) of borax to the pint of water at above 38° C. (100° F.) Benzoic acid or one of the benzoates may be administered by the mouth at the same time, if the stomach be vigorous; otherwise I prefer Bethesda or Poland water in free doses, from one to three pints a day.

In any case the urethra should be thoroughly tested with a smooth steel sound of large size to insure its patency, and that the operator may become familiar with any peculiarities of the canal.

None of this preparation is absolutely necessary, but it is desirable. On more than one occasion I have gone out of town to operate upon a patient who had no preparatory treatment and with the happiest result. But I have always gone prepared for any emergency.

Such ordinary treatment as the use of quinine and what anodyne may be required, is governed by the rules applicable to all cases of urinary surgery.

After Treatment.—The after treatment is equally simple. The catheter may be required to relieve temporary retention of urine; the washings with borax are indicated in all conditions of atony where the urine has been previously putrid in any degree; otherwise nothing is usually called for except a little quinine, more or less anodyne for a few days, a continuance of Bethesda water or the alkaline diluent, and rest in bed for perhaps a week. I am accustomed to assure a patient that, if all goes reasonably well, he will be up and about in one week after his operation.

A final wash and search for possible last fragments can not be omitted after the patient is up and about, before dismissing him as cured.

The Operation.—The present method of operating followed by Dr. Van Buren and myself, is the following: The patient is left upon his back on his bed, which, for the convenience of the operator, should be a high one. His hips are raised a little upon a pillow, and a rubber cloth is placed beneath him. One assistant attends to the ether, another to the washing bottle. No other assistants are necessary, unless the case is one of those exceptional patients who do not lie quiet, or who become

rigid under an anæsthetic. In such cases two more assistants are necessary to hold the knees quietly apart.

If the urine has been ammoniacal and decomposed, the first step in the operation is to introduce a tube, and after having drawn off the urine, thoroughly wash out the bladder with a warm solution of borax. A little of this wash is left in the bladder, and the crushing is then carried out according to ordinary rules, from six to twelve seizures being made in rapid succession until a fair amount of detritus has been created. Then the tube is introduced and the bladder washed so long as fragments continue to fall freely into the receiver, changing the position of the end of the tube in the bladder from time to time. The lithotrite is reintroduced and the washing repeated until the bladder is empty of stone. A little fine dust may remain and come away during urination, or even a small fragment may be overlooked or left behind knowingly, rather than prolong the operation greatly; I will show you the reason for this by washing in a flask presently. A large fragment should not be left behind, a small one or several of them do not inconvenience the patient or interfere with his prompt recovery from the operation, and much unnecessary time may be consumed in attempting to get it out.—*Annals Anat. and Surg. Soc., Brooklyn.*

IMPURE BROMIDE OF ETHYL.

Dr. Carl Jungk, in the *Therapeutic Gazette*, has given the results of analyzing a large number of samples of hydrobromic ether. Among the samples examined were specimens of the ether used by Dr. J. Marion Sims and of that used by Dr. Lewis in their fatal cases. The reactions of these demonstrated conclusively their entire unfitness for purposes of inhalation.—*The Medical Record.*

DR. TANNER'S FAST.

On July 14th, Dr. Tanner was reported to have gone for sixteen days without food. The amount of water taken is said to have averaged from half an ounce to an ounce a day. Four ounces were taken in the first nine days. Water is frequently used to rinse the mouth and wet the head and feet, but none is, apparently, swallowed. The amount of flesh lost has been a little less than a pound and a half per day. The temperature and respiration have been normal; the pulse has occasionally run up to 100, but not much beyond that point. The general condition has been very good. The faster walks about and converses freely. His mind has continued clear, but has become somewhat irritable. He complains of no pain or great suffering; but he is restless, and his countenance bears a

pinched look. There is a gradually increasing physical weakness and tendency to doze or lie quietly on the bed.

There has now been established a watch of eight regular physicians, in conjunction with the eclectics. All the watchers seem to feel great confidence that the fasting man is in earnest and has taken no food.—*The Medical Record.*

PRODUCTION OF SEX AT WILL.

We have had placed in our hands a series of letters upon the production of a desired sex, written to a scientific gentleman of this city, by Mr. D. D. Fiquet, of Houston, Texas, a graduate of the Harvard Law School, whose failing health drove him from the bar to a business in the open air, and who is at present a practical cattle-breeder.

In these letters Mr. Fiquet claims to have discovered a system by means of which, with unerring certainty, he can cause a cow to give birth either to a bull or a heifer calf, according to his wish. He developed his system at the cost of much previous experiment and many failures in his attempts "to discover the causes which control and the conditions which determine the matter of sex."

He made use of all available scientific authorities of note, discarding them one by one as he proved their fallacies. In this way he disposed of Thury's law, which, says Mr. Fiquet, "is utterly worthless in practice and wrong in theory. It is flatly contradicted by the ordinary experience of stock-raising."

Being impressed by Waldeyer's remark in his work on the ovum, namely, that for some time after impregnation the ovum is, in a certain sense, hermaphrodite, Mr. Fiquet was led to imagine that the matter of sex might perhaps be controlled and determined by the female during pregnancy. Familiar, also, with the fact that in the bee, moth, and butterfly families sex can be governed by the simple conditions of care and feeding, he resolved to try the effects of nutrition upon his cows after the act of coition. To this end he selected two animals whose condition for many months had been identical, and had them served by the bull. Having now two cows in precisely the same physical status, he fed one richly, and underfed the other. At term each cow produced a heifer. He then repeated the experiment with two other animals, treating them during their pregnancy in a similar manner. Each cow gave birth to a bull calf. Mr. Fiquet naturally abandoned this method, and, despairing of securing any aid through physiology, he "turned to nature herself."

An intimate acquaintance with the birth and death-rate statistics of life insurance had led him to remark the uniformity in the proportions of each sex. This suggested the thought

that a harmless method of disturbing this uniformity of sexes at birth might be the solution of his problem. How to accomplish this was the next question.

Recalling to mind all his married acquaintance, he made the observation, not only that in some families female children, in others male children, predominated, but likewise that a vigorous, passionate man and a cold, unimpassioned woman generally begat a surplus of female children, and that, reversing the temperaments, boys abounded. Then occurred to him the idea that if, by any means, he could render his bull more passionate than the cow at the time of coition he would thus secure the birth of the opposite sex, or heifers, and *vice versa*. Believing he could accomplish this by feeding and careful attention, he began his experiments.

Choosing eight cows, he fixed upon one from which he desired a bull calf,—the other seven were to produce heifers. Having carefully noted the dates of the periods of the eight cows, he allowed them to pass one œstrum, and thus was able to anticipate the return of the period in each. The cow destined to produce a bull calf came in first. Mr. Fiquet began to feed her most bountifully upon grain, corn, oats, meal and rich hay. A few days before the reappearance of her period she was withdrawn from the herd, stabled, "and right royalty attended. As anticipated, her passion came and in full blast." The bull, meanwhile, had been fed upon green and cooling food, which moderated the usual vigor of his passion, and the difference between the animals "was thus rendered plainly discernible."

"My theory," says Mr. Fiquet, "was that, the cow being far more desirous for the bull than was the latter for the cow, nature was calling more loudly through the female than through the male for the natural gratification of her desires; that the services of a male were more necessary than those of a female; and that *pari passu*, the creation of a male thus became a more natural necessity than that of a female." This he supposed to be the desired disturbance of uniformity in nature, and consequently that in her very economy nature required the production of a bull calf. "Think of the theory as you may," he adds, "the cow was served by the bull twice, and the result was the desired bull calf."

The remaining seven cows were submitted to the gallantry of a castrated bull, who although impotent, served as a never-failing detective of the periods of the cows. Mr. Fiquet was thus enabled to anticipate their seasons of heat with exactitude, and, moreover, supposed the fruitless activity of this bull would be of use in reducing the passion of the cows.

Previous to his introduction to each of these cows, the other bull was generously fed on various rich grains and clover hay. On the other hand, the several cows were kept cool by light food,—grazing, green fodder, and bran. When their periods

arrived, the animals were allowed to run temporarily with the castrated bull, and their frenzy was thus partially allayed. Being finally coupled with the service-bull, the conditions in each case were a rampart bull and a moderately excited cow,—the reverse of the conditions in the first experiment. The bull therefore being more anxious for the cow than the cow for the bull, Mr. Fiquet, for reasons already given, again predicted the birth of a calf whose sex would be the opposite of that of the more passionate animal. The result was the birth of seven heifer calves. In all these instances, then, Mr. Fiquet was successful. Continuing his experiments, he bred from five other cows, the sex of the calf in every case being correctly predetermined. The cows of several of his neighbors were served by his bull, and, having inquired as to the previous treatment and feeding of the cows, and knowing the condition of his bull, Mr. Fiquet predicted the sex of the resulting calves with unvarying correctness. "My success," he says, "is therefore either unprecedented luck at guessing and the merest fortuitous accidents, or these experiments were based upon physiological truths."

He confesses to a lack of knowledge in the methods of horse-raising, but presumes his theories will hold good in the breeding of all uniparous animals, and believes his results can be reached by any careful, systematic breeder.

He feeds and prepares his bull for every special occasion, and does not allow him to serve more than one cow per week. If the bull be in course of preparation for a particular cow, he is never permitted to serve another which chances to come previously into season. An entire month is sometimes occupied in this preparation.

Mr. Fiquet's system will oblige the owners of large herds of cattle to keep several bulls, but the case with which they can breed either sex at will (supposing the new theory to be true) will more than compensate for the increased expense, for the growth of their herds will be rapid.

Mr. Fiquet has never used excitants of any kind, relying solely upon a generous supply of rich foods. He expect to encounter incredulity on the part of cattle-raisers, and seems to desire avoidance of discussion. He simply presents his facts, the exactness of which is formally substantiated by certificates signed by trustworthy and well-known citizens of Houston, and now in the hands of a gentleman of Boston.

Mr. Fiquet has already communicated details and results of his experiments to the *Journal of Agriculture*. In reply, a critic, without reason we think, finds them a confirmation of Thury's law, namely, that when coition occurs in the early stages of the female's passion female offspring should be produced, the contrary if coition take place late in the period of the female. We fail to discover in what manner Mr. Fiquet's experiments prove the correctness of this theory.

The Monthly Bulletin of the American Jersey Cattle Club for July and August, 1879, briefly quotes the experience of Mr. Fiquet. The editor makes no direct comments, but foreshadows a shoulder-shrugging incredulity.

Having carefully read Mr. Fiquet's letters, our own impression is that he is a man of perfect sincerity. The modest manner in which he presents and details his experiments, his impersonal anxiety that practical cattle-raisers should be made familiar with his success, and the very evident absence of all wish on his part to win notoriety seem to be proved by his desire that some gentleman of scientific reputation, or some institution of influence, should call upon agriculturists and cattle-breeders to try the experiments we have detailed.

If Mr. Fiquet be correct in his theories, and if the results he has obtained be more than mere coincidences, they will, it must be confessed, not only revolutionize cattle-raising, but add enormously to the wealth of the world.—*Boston Medical and Surgical Journal*, May 13.

HENNING ON THE APPEARANCE OF THE TONGUE IN DISEASE.

From London Medical Record.

1. The elongated and pointed tongue invariably indicates irritation and determination of blood to the stomach and intestines. The extremities are often cold. It is also associated with excitation of the nerve centres. This tongue is often found, but more especially among children. The indications are to allay irritation and divert the blood from the stomach and bowels. We should be very careful how we make our prescription in such cases, if we give an irritant cathartic it invariably aggravates the disease.

2. The pinched and shrunken tongue indicates atony of the digestive organs, often found in dyspepsia and kindred diseases. The treatment is plain, the pathological conditions being evident at a glance from the appearance of the tongue.

3. The coating (*sabarra*) or fur should be well studied. It may be greater or less in thickness, dry or moist, or clammy, more accumulated at the posterior portion. It is said that when the tongue is heavily coated at the base with a deep yellow coat the liver is at fault. This is not always the case, and from my observation more often not the case. I have seen cases of jaundice with a white-coated tongue. Tobacco chewers nearly always have a yellow-coated tongue, and their liver may be sound.

4 The dry tongue has a very important significance. When we have patients who are suffering from some form of fever, pneumonia, or any other acute disease, with such a tongue, they are in danger and require close attention. In such cases nutrition and assimilation are suspended and food

cannot be taken, and if taken cannot be properly assimilated. When given it should be in fluid form, and always above the temperature of 100° and of a character nutritive and digestible. The digestive organs can do but little work, yet proper food given at proper intervals does good, but these organs need all the rest they can get until the disease is subdued. Dryness of the tongue is also associated with vascular excitement, and particularly with excitation of the ganglionic and nerve-centres. Hence the arrest of secretion and this dryness. Here we readily read the state of the nervous system. In many cases the sympathetic nerve is not only excited and irritated, but there is involuntary contraction of muscular tissue, thus suspending the secretions of the several organs. The indications are proper sedatives for the vascular excitement and diaphoretics for contractions or excitement of the nerves, associated with other proper treatment. By this course we shall soon see our patient with a moist tongue and some of the secretions re-established.

5. Often the tongue changes in the disease from the dryness above referred to, to a brown or black color, with sordes about the teeth. The common idea is that the system is in a typhoid condition. This is true, yet it undoubtedly means also that the blood is in a septic condition—a very important fact for us to know. Then our best antiseptics should be given, with stimulants and tonics. Thus we can readily read, from the appearance of the tongue, the condition of the digestive organs, function of nutrition and assimilation, the condition of the nervous system, and the state of the blood. Of course we must take all other symptoms into consideration. Yet the appearances of the tongue as pointed out seldom fail in giving us at a glance valuable information as to the true condition of the system.—*Canada Medical Record.*

PARAPHIMOSIS—SIMPLE MODE OF REDUCTION.

In very difficult cases, where ordinary means fail, Bardinet proceeds as follows: he takes a hair pin, presses the points together somewhat, and inserts the curved end under the strangulation back of the gland. He then applies a second and a third at intervals around the gland; then, drawing the prepuce forwards, reduces it with great facility, the skin gliding over the three bridges without obstruction.—*Le Practicien.*—*Chicago Medical Journal and Examiner.*

DEMME ON THE TREATMENT OF INTESTINAL CATARRH IN INFANCY.

Demme, in the Sixteenth Report of the Hospital for Children at Berne, observes that in the severe forms of intestinal catarrh in children who have been too early artificially fed, restoration

to sucking does not suffice, and he recommends in such cases the administration of alcohol, especially pure cognac, with the addition of creasote or opium, or with the concurrent use of benzoate of soda. He prescribes cognac, 2·5 grammes, creasote 1 centigramme, powdered gum 1·5 grammes, distilled water 50 grammes, to be employed in the course of twenty-four hours between feeding times. For children some weeks old, the quantity of alcohol may be increased daily from 2 to 5 grammes. The object here is to stimulate nutrition, and at the same time to prevent the formation of the abundant crop of micrococci which, under such circumstances, Demme has found to accumulate in the intestinal glands.—*London Med. Rec.*

STEVENS ON TREATMENT OF GOITRE BY CHLORIDE OF AMMONIUM.

Dr. Stevens, of Dunham, Canada, states (*Canada Medical Record*, February, 1880) that he has employed chloride of ammonium in the treatment of seven cases of common goitre, or simple hypertrophy of the thyroid gland, with most surprising and satisfactory results. Six of the patients were girls under 20, and all of them were entirely cured after about three months of treatment. The seventh case was that of a married woman, aged 40, and the mother of several children. The tumour in this case was of enormous size, and the patient suffered a good deal from disturbances of respiration and circulation. She took the chloride two or three months, and at the end of that time the bronchocele was reduced one-fourth in size, and all the circulatory and respiratory symptoms were relieved. Treatment was discontinued, because she became pregnant. The dose used in all the cases was ten grains three times a day, but Dr. Stevens thinks larger doses might be useful in old cases. No other medicine or hygienic treatment was combined with the chloride of ammonium. In the cases of the six girls, the tumour had made its appearance about puberty, but in none of them was there any evidence of menstrual derangement or of uterine disease.—*The London Med Rec.*

PYROGALLIC ACID IN PHAGEDENIC CHANCRE.

VIDAL.—Journ. de Méd., Feb., 1880, p. 68.

The author has found a new use for pyrogallic acid, which he uses a good deal in treatment of skin diseases; that is, in the treatment of phagedenic chancres. In two cases the result was almost immediate. In the first case there was phagedenic chancre of rapid march, accompanied by a suppurating bubo, also phagedenic. The chancre was dressed with an ointment of pyrogallic acid and the bubo was touched only with the

same; in a few days the ulceration was arrested. The second case was a chancre from inoculation and had become phagedenic, the size of a five franc piece. The same result was obtained in three days and cicatrization began. The ointment employed was at first 10 per cent., then 20 per cent. The strength should vary according to circumstances and the sensitiveness of the patient.—*Chicago Medical Journal and Examiner.*

UNION OF TENDONS.

In the *Medical Times*, July 17th, 1880, Dr. Charles Baum reports the following interesting case from the clinic of Prof. D. Hayes Agnew:

D. M. McI., admitted March 17, 1880, about one hour after the accident. While removing sawdust from beneath a rapidly revolving circular saw, the saw-teeth came in contact with the dorsal surface of his right hand, dividing all the tissues and almost completely severing the metacarpal bones, except that of the thumb, just one and a half inches from the wrist-joint.

The entire wound was lacerated, and gaped almost one inch. The distal ends of the tendons of the extensor communis digitorum were lying at the bottom of the wound, much lacerated. The proximal ends were retracted to such an extent as not to be visible. There was a groove almost one-eighth of an inch broad, transversely, in the metacarpal bones.

The ends of the severed tendons were immediately approximated by means of fine carbolized catgut. Each retracted tendon was brought down by passing a dissecting forceps along the sheath to the extent of three-quarters of an inch and seizing the lacerated end. The tendency to retract—over which the patient seemed to have but little control—was so great that it was necessary to secure the end with a tenaculum while the sutures were being passed. A suture was passed first through the centre of the tendon, and then through its sheath upon each side. Immediately after the sutures were fastened the patient was able to extend his fingers almost as well as before the accident. The procedure was not a very painful one, he stated. After removing bone and wood-dust, the edges of the wound were loosely approximated with the same suture, dressed with carbolized oil, and the hand, with the fingers slightly flexed, was placed upon a palmar splint.

The wound was dressed thirty-six hours afterwards, at which time there was no puffiness or inflammation apparent. Upon the sixth, seventh, eighth, and ninth days granules of bone-dust escaped, with a small amount of purulent discharge. At the expiration of two weeks, upon being allowed to try, the patient was able to extend his fingers slightly. At no time was there any discharge from the sheaths of the tendons. The lacerated wound upon the surface healed kindly by granula-

lations. He was discharged just five weeks after admission, with power to extend his fingers, but not completely, as there still remained a slight amount of false anchylosis about the articulation of his fingers.

Upon the 21st instant, I had the satisfaction of seeing his hand, and found the power of extension strong and complete. He could pick up a pin with ease, his fingers having become as supple as ever. The motion of abduction of the thumb is not complete, being restricted by some contraction of the cicatrix upon the dorsal aspect of the hand. He has long ago resumed work, and experiences no restraint in the muscular action of his fingers.—*Philadelphia Medical Times*, July 17.

THE TREATMENT OF WHOOPING-COUGH WITH ATROPIA USED HYPODERMICALLY AND CARBOLIC ACID INHALATIONS.

In August, 1879, having under my care a number of cases of whooping-cough, in some of which the paroxysms were unusually severe, I determined to try this plan of treatment, which, in part, I had shortly before seen highly recommended in "The Lancet" and in "The London Medical Record"—the difference being, that I used the atropia hypodermically, instead of giving it by the mouth, as recommended in "The Lancet." I did so because of my great faith in hypodermic medication; because the dose of atropia, which is unvarying in its strength, is easily regulated; and because the result of all investigation in regard to its action shows not only that cutaneous sensibility is rapidly lowered by it, but that at the same time an anæsthetic effect is produced upon the afferent branches of nerves which originate spasms.

Each minim of the solution used contained $\frac{1}{120}$ of a grain of atropia. I injected one minim or more, according to the patient's age, with 10 minims of water, always using it as early in the morning as possible, and repeating it at night if occasion required. The carbolic-acid solution, of the strength of five per cent., made with the very best crystals, was used as follows: five strips of Canton flannel, three inches wide and five inches long, were saturated with this solution, and hung around the patient's bed and about the room at bed-time, and they were moistened with the solution once again during the night.

The result of the treatment in these cases justifies the belief, I think, that with it we may expect a steady diminution in the number and the duration of the paroxysms, a change in the character of the whoop, and a cure of the disease in a much shorter time than has been accomplished by any other means. Out of several cases successfully treated in this way, I report two in detail:

Case 1.—Mary S——, three years old, first seen August 1st,

had well-developed whooping cough. The mother stated that she had whooped fifteen times daily for the previous three days. She had particularly noticed each one because of their being so severe. One minim of the atropia solution was injected, and the carbolic acid was used at bedtime. August 2d.—Since the last note she has had ten paroxysms, those at night having been less severe. 3d.—There have been six paroxysms since the last visit—one, at night, having been very severe. 4th.—Six paroxysms have occurred, two of them very severe. The nurse had neglected the inhalations. 5th.—There have been four paroxysms, of short duration. 6th.—Three paroxysms, of very slight severity, have occurred. 7th.—But one paroxysm has occurred; very severe, however. 8th.—There have been no more paroxysms. She is very thirsty. The treatment, which had consisted of the daily repetition of that mentioned in the first note, was now suspended. 9th.—There have been two paroxysms. Treatment renewed. 10th.—She has had no paroxysms, and has coughed but little. At the end of three days more she had entirely recovered.

Case II.—John K——, five years old, was first seen August 14th, at night. The mother said that he had been sick for some time, and that, as well as she could remember, he had had twelve paroxysms daily for two days previously. The atropia and carbolic-acid treatment was begun at once. 15th.—Ten paroxysms have occurred. 16th.—There have been nine paroxysms—so severe that a second injection had to be given. 17th.—He has had six paroxysms, much less severe. 18th.—There have been four paroxysms—one, at night, having been very severe. The use of the carbolic-acid had been neglected. 19th.—Three paroxysms have occurred, shorter and milder. 20th.—One paroxysm. 21st.—He has had four paroxysms. He seems to have taken cold, and has high fever. The breathing is very short, but no pulmonary complication is discovered. The injection was omitted, but the use of carbolic acid was continued, and he was ordered small doses of spiritus mindereri. 22d.—There is no longer any fever. The paroxysms have been six in number, but they have not been so severe as before. The injections were resumed, and the spiritus mindereri was discontinued. 23d.—Three very mild paroxysms have occurred. 24.—One paroxysm. 25th.—No further paroxysms have occurred. The treatment was now stopped, and in four days he was well.—*Wm. Lee, M. D., New York Medical Journal.*

PEPSIN.

If pepsin is dissolved or suspended in any fluid of neutral re-action, its power of digestion is interfered with; that means, it cannot show its full strength. If, however, the solution is made alkaline, the pepsin at once becomes inert—it loses all power to change albumen into pepton. The proper relation between some kind of acid—hydrochloric or lactic to be pre-

ferred—and the pepsin is an essential condition to bring out its digestive power, and, in therapeutics, the good effects of pepsin. Not only as an exception, but we well might say as a rule, we find in looking over prescriptions which contain more or less of pepsin, that the practitioner tries his best to combine pepsin with a variety of vegetable or mineral substances in such a manner that it cannot show its digestive power at all. Nothing is more common than to see pepsin combined with subcarbonate or subnitrate of bismuth, and yet it can easily be shown that the addition of even the latter salt to artificial gastric juice will interfere with the digestion of egg albumen. Bicarbonate of soda, the different preparations of iron, strong alcoholic tinctures and elixirs are incompatible with pepsin.—*Chicago Medical Journal and Examiner.*

EDITORIAL.

YELLOW FEVER IN NEW ORLEANS.

The presence of one case of this dreaded disease has caused a degree of anxiety throughout the country, which may culminate in rigid quarantines, in spite of the precautions taken to prevent an outbreak of the fever. The State Board and National Board of Health will remain untiring in their best endeavors in the cause of sanitation, and Inspectors of freight permit nothing infected to leave the city by rail or river. Bills of lading are closely scrutinized and articles of a suspicious nature removed. Precautions are taken with passengers and certificates are issued when the inspector is convinced that there is no danger of their being carriers of the infection.

The appearance of this case must be attributed to no local influence due to New Orleans, and the history of the case and various facts connected with the vessel, we feel will bear us out in this opinion. We must premise the recital of the history of the vessel, and cases occurring on her, by the statement that every effort has been made to obtain the exact facts.

The Swedish Bark Excelsior, with crew consisting of captain, two mates and nine seamen, partially loaded with 3600 sacks of coffee, and with several tons of stone ballast, reached the

Mississippi Quarantine Station, June 24th, 1880, after a voyage of 46 days from Rio Janeiro. The bark had been detained at Rio twenty-nine days, yellow fever was prevailing there, and on two occasions the crew went ashore. During the voyage the crew visited the hold of the vessel.

On arriving at the quarantine station the hatches were opened, part of the cargo was placed on deck, and the rest shifted in the hold. The hold was fumigated with sulphurous acid gas, and the bilge, after being pumped out, was disinfected with a solution of copperas and carbolic acid. The quarters occupied by the crew were fumigated with sulphurous acid gas and well sprinkled with carbolic acid. The clothing of the sailors underwent the same disinfecting process. These cleansing operations were repeated at least three times during the stay of the vessel at quarantine.

There had been no sickness on the bark from the time of her departure from Rio until her arrival at the wharf at New Orleans. She was detained at the quarantine station eleven days, until July 5th, arrived at 2 o'clock, A. M., July 6th, and was moored at the foot of Calliope street, in the First District of the city. The work of breaking cargo was not commenced until the morning of July the 7th, and was completed on the 8th.

The crew of the vessel did not assist in breaking cargo. This work was accomplished by a force of twenty men, one stevedore, one foreman (white), and eighteen laborers (colored), all residents of New Orleans, and, according to a careful report made of the facts by Dr. Joseph Holt, Sanitary Inspector of the First District, were all acclimated men. The ballast was placed on the wharf near the vessel, and the coffee taken to a warehouse a short distance away.

On the 7th of July, 43 hours after the arrival of the vessel in port, one of the sailors was taken sick with chill and high fever; he was kept on the vessel until July 10th, at 11, A. M., when he was removed to the Touro Infirmary. The physician attending him on the ship did not recognize his disease to be yellow fever. When taken to the infirmary he was delirious, had a temperature of 102°, and a pulse of 80. A small quantity of urine was

drawn from his bladder and found to be highly albuminous. At 12, M., he had black vomit, and a little later bleeding from the gums. His temperature rose to 105°, and at 11 o'clock, P. M., twelve hours after his admission, he died. He was attended in the Touro Infirmary by Dr. F. Loeber, and visited by Drs. Joseph Jones and S. S. Herrick, respectively President and Secretary of the Board of Health. Decomposition set in so rapidly that it was impossible to make a *post mortem* examination.

The President of the Board of Health immediately issued orders for the thorough fumigation of the cargo which had been deposited in the warehouse, the disinfection of the Touro Infirmary, and had the Excelsior towed back to the quarantine station.

Owing to the fact that the ballast had been removed from the vessel, the Excelsior did not leave the wharf at the foot of Calliope street, until 12, M., July 11th.

Just before leaving New Orleans, Dr. Jones went on board and mustered the crew on deck—one of the sailors was found indisposed, and on the way down the river, undoubted symptoms of yellow fever developed themselves. Soon after arrival at the quarantine station another fell sick. These cases were removed to the quarantine hospital, and terminated fatally. On July 14th, another sailor was taken with yellow fever, was removed to the quarantine hospital and is now convalescing. The rest of the crew have continued healthy.

The laboring force that removed the cargo of the vessel, were negroes, and the white men at the warehouse are known to be acclimated. The rumor that two of the sailors did not return to the quarantine station with the Excelsior, is without foundation.

No other case of yellow fever has made its appearance in New Orleans this year. The health of the city is good, and the cleansing of each district is being accomplished by the combined forces of the Board of Health and New Orleans Auxiliary Sanitary Association. The season is well advanced, malarial fevers not prevailing to any considerable extent, and the prospect for health and prosperity encouraging.

The fact that a case of yellow fever existed on a vessel in the port for three days without being discovered, should direct the health authorities to more strenuous efforts, and every vessel at the wharf should be inspected daily during its stay in port. The Board of Health has done well in having every vessel visited and inspected on arrival, but the experience with the Excelsior proves that repeated inspections are demanded. Physicians practicing on vessels while in port should be held strictly to the Sanitary ordinances, and every case of disease, no matter what its nature, should be reported to the Board of Health, and any derilection should be severely but justly acted upon.

Reviews and Book Notices.

Transactions of the Indiana State Medical Society, 1880. *Thirtieth Annual Session.* 8 vo. Pp. 362.

The address of the president, Dr. J. R. Weist, of Richmond, had for its title *Problems in Relation to the Prevention of Disease.* After detailing the cost of various epidemic visitations in life and in money, he advances the melancholy, but somewhat trite proposition, that "The ratio of increase of population is declining, while that of consumption, insanity, syphilis, pauperism and crime is increasing." It is quite natural that the ratio of natural increase of population in this country should diminish, as its density increases and it presses upon the capacity of production for sustaining life, and such a tendency is not to be deplored. As to increase in the ratio of calamitous conditions named, we regard it as rather imaginary than real. Insanity and syphilis are better observed now than formerly, and consequently oftener recognized. Pauperism is fostered by benevolence and relief, both private and public, and quite probably is on the increase, but it does not follow that poverty is increasing, and we do not believe that it is. In old communities crimes against the person have a tendency to diminish, while those against property are more noticed and repressed than in newly settled countries. As to pulmonary consump-

tion, it is probably true that density of population favors its prevalence; but, on the other hand, drainage of the soil and sub-soil operates as a preventive. This sort of exaggeration is common enough among preachers and temperance lecturers and may be proper for those who aim at convincing people through their fears rather than their reason; but we regard it as inapplicable to a medical audience on a subject pertaining to the temporal welfare of people. He is quite right, however, in pointing out the folly of people who are careful breeders of domestic animals, but totally without discretion in the selection of husbands and wives, so far as regards physical traits.

Dr. W. S. Haywood, on *Human Longevity*, takes the ground that the notable instances in modern times are without suitable authentication, and unworthy of credit. The fact that no examples occur of life prolonged much above 100 years among people of high rank, whose ages are carefully recorded and whose general duration of life is decidedly beyond the average of mankind, taken with the fact that the reputed centennarians are almost without exception obscure and ignorant persons, tends to cast discredit on claims to longevity. The records of life insurance companies sustain this view, and it is to be considered that their risks are taken upon selected lives, in which hereditary longevity is an important feature.

Dr. F. J. Van Vorhis, on the subject of *Expert Evidence*, takes an intermediate ground between the extreme that a physician is bound to attend every summons and answer all questions, like an ordinary witness, and the opposite one, that his professional knowledge, when required in court, is always entitled to special compensation. He properly observes that the knowledge which is the common property of the profession is no more privileged than that of the artisan or tradesman in his particular calling. He would base claim for special compensation upon the general principle of service rendered, but we regard that as lacking in precision. A clear and indisputable claim, in our opinion, would be previous original investigation in the line of inquiry actually presented in the court, or special investigation undertaken with the view of elucidating the case on trial. Any opinions beyond these grounds, demanded or

given, might or might not be privileged by the court, for the rules are not uniform nor precise.

In a paper on *Public Hygiene and Syntcretic Jurisprudence*, Dr. J. W. Hervey alludes to a contemplated association for the improvement of posterity. The members are to be chosen with reference to excellence in physical and mental traits, after severe scrutiny, and are to be obligated not to marry, either within or without the society, without the assent of the inspectors or judges. The scheme is certainly attractive in theory, but we regard it as rather utopian. We apprehend this difficulty in the working of the plan among English-speaking people: candidates for matrimony will not surrender the right of private judgment to other parties, even though acknowledged to be wiser and better informed. Really we see no practicable remedy for ill-assorted unions, except the general diffusion of knowledge, particularly of physiology.

Dr. Mary F. Thomas advocates putting medical women upon the staff of hospitals for insane women. Her arguments would be equally applicable to all hospitals where women are inmates.

There are many other papers in the volume, which we have not space to notice here. The general standard of the articles is fair without surpassing excellence in any. S. S. H.

The Ship Origin of Yellow Fever, with Comments on the Preliminary Report of the Havana Yellow Fever Commission. (Reprint from Gaillard's Journal.) By Robt. B. S. Hargis, M.D., Pensacola, Fla. Pp. 19. 1880.

The first part of this pamphlet is devoted to a controversy between Dr. Hargis and Dr. Chaillé, President of the Havana Yellow Fever Commission. A portion of this has reference to the endemicity of yellow fever in the Island of Cuba, which need not be noted here, as we have relieved our mind of this particular point in another part of the present issue. Our remarks will be confined to the supposed marine origin of yellow fever.

The sum total of the testimony in favor of his theory, so far as we can gather from his pamphlet, consists in a few instances of apparently spontaneous outbreak of the fever on vessels at sea, which were not known to have become infected by contact with

the land or its products, nor with infected vessels. The ship *Northampton*, at New Orleans in 1853, is cited as an instance. She was certainly an infected vessel soon after her arrival in this port, though on her previous voyage she had not been near an infected port. It was the opinion of the Yellow Fever Commission on that epidemic that it originated on the spot, from bad sanitary conditions; while many others believe that the *Northampton* was infected by the ship *Augusta*, which lay in close proximity, and which latter ship came up the river with the ship *Camboden Castle* from Kingston, Jamaica, where she had lost her captain and several of her crew with yellow fever. The ships were both brought up alongside the same towboat, and there was free communication between them across the latter. The only difficulty in the way of this theory is the fact that the cases on the *Northampton* appeared simultaneously with those on the *Augusta*, instead of a little subsequently; but it is well known that the period of incubation in yellow fever is far from being fixed or uniform. In general, we should say of apparently spontaneous outbreaks, whether ashore or aboard ship, that the investigation is incomplete. There is no need of appeal to miracle or marine origin.

But, if the fever springs from the tropical seas of America, why does it not become diffused throughout the warm waters of the Atlantic basin, at least, and thus infect all its shores? Having reached the western extremity of the Mediterranean sea and the coast of Spain, why should it not have extended eastwardly its whole length? Why is it not an every day occurrence for vessels sailing between Europe and New Orleans to catch yellow fever in the infected Gulf of Mexico? Why does yellow fever prevail annually ashore at Vera Cruz, and never on the shipping, which has to lie a mile distant from shore? Why are vessels lying in the harbor of Havana, which discharge and receive cargoes by lighters and whose crews are not allowed to go ashore, so much less likely to become infected than those which lie at the wharves?

Until the above inquires are answered satisfactorily, we ask to be excused from accepting any *dropsical* theory of the origin of yellow fever.

S. S. H.

Books and Pamphlets Received.

The Detroit Medical College—Detroit Michigan, Thirteenth Annual Announcement and Catalogue, 1880–81.

A Reply to Criticisms on "The Problems of Insanity" with Remarks on the Goshing Case. Delivered before The New York Medico-Legal Society, April 16, 1880. By George M. Beard, A. M., M. D., member of the New York Medico-Legal Society: Fellow of the New York Academy of Medicine, etc. etc.

Annual Announcement Espicopal Female Institute, Winchester, Va. Session 1880–81.

What Constitutes a Discovery in Science. By George M. Beard, A. M., M. D.

Report of the Examination of 27,927 *School Children for Color Blindness.* By B. Joy Jeffries, A. M., M. D., Boston.

Sixth Annual Report of the Touro Infirmary and Hebrew Benevolent Association of New Orleans.

Annual Announcement of the St. Paul Medical College, Medical Department of Hamline University of Minnesota.

Catalogue of the Bingham School for the year ending June 2d, 1880, *Mebaneville, N. C.*

The American Medical College Association: Fourth Annual Meeting held at New York City, May 31st and June 1st, 1880.

The Therapeutic Value of the Iodide of Ethyl. By Robert M. Laurence, M. D., Boston. Reprint from the New York Medical Record, June 19th, 1880.

The History of the Blood-Vessels. By Edmund C. Wendt, M. D., New York. Reprint from the New York Medical Journal, July, 1880.

The Irritable Bladder in the Female. By L. S. Oppenheimer, M. D. Reprint from the Louisville Medical News, June 12, 1880.

Sanitary Survey of Indianapolis: Topography and Surface Geology—Water Supply—Disposal of Excreta, Cellar and Yard Filth, etc. Thad. M. Stevens, M. D., Indianapolis, Indiana. Reprint from the Transactions of the Indiana State Medical Society, 1880.

Meteorological Summary—June.
Station—New Orleans.

Date.	Daily Mean Barometer.	Daily Mean Temp'ture.	Daily Mean Humidity.	Prevailing Direction of Wind.	Daily Rain-fall.
1	30.040	82.7	73	South	....
2	30.040	81.5	75	S. W.	.08
3	30.072	80.5	73	N. E.	....
4	30.053	79.7	75	S. E.	.18
5	30·008	81.0	79	S. E.	.19
6	29.988	81.2	73	West.	....
7	30.004	80.7	76	S. W.	·52
8	29.998	81.7	71	S. W.	....
9	30.016	82.5	70	S. E.	....
10	30.038	80.2	78	S. E.	1.08
11	30.085	80.7	76	S. E.	.03
12	30.085	81.2	77	South	.25
13	30.060	82.2	76	S. W.	.02
14	30.018	83.2	69	S. W.	....
15	29.990	83.7	67	West.	....
16	30.006	80.2	67	N .W.	....
17	30.053	78.0	52	N. E.	....
18	30.104	79.0	58	East.	....
19	30.097	80.0	53	East.	....
20	30.042	77.0	64	N. E.	05
21	29.939	76.2	64	East.	....
22	29.874	75.7	80	East.	.46
23	29·918	77.2	76	S. E.	.24
24	29.969	79.0	72	S. E.	.24
25	30·032	77.5	80	South	1.84
26	30.103	81.0	79	South	.13
27	30.129	82.0	72	South	.04
28	30.092	82.0	75	South	.23
29	30.103	77.0	80	S. W.	.82
30	30.117	79.0	74	S. E.	.03
	.....	....	....	... ..	....
Sums					
Means	30.036	80.1	72	S. E.	6.43

General Items.

Mean Bar.
Highest Barometer, 30.163.
Lowest Barometer, 29.854.
Monthly Range of Barometer, 0.309.
Highest Temperature, 90° on 14th.
Lowest Temperature, 69° on 17th.
Greatest Daily Range of Temperature, 16° on 19th.
Least Daily Range of Temp., 9° on 22d.
Mean of Maximum Temperatures, 86°6.
Mean of Minimum Temperatures, 73°9.
Mean Daily Range of Temp., 12°7.
Prevailing Direction of Wind, S. E.
Total Movement of Wind, 5,238 miles.
Highest Velocity of Wind and Direction, 29 miles, East.
Number of Clear Days, 3.
Number of Fair Days, 24.
Number of Cloudy days on which no Rain fell, 1.
Number of Cloudy Days on which Rain fell, 20. Total number of days on which rain fell, 20.
Dates of Luna Halos, ——.

COMPARATIVE TEMPERATURE.

1871.....		1876	80°.6
1872.....		1877.....	81°.3
1873 .....80°.1		1878.....	82°.0
1874.....81°.3		1879.....	80°.1
1875.....80°.1		1880	80°.1

COMPARATIVE PRECIPITATION

1871.....inches.		1876: 6.20	inches
1872..... "		1877: 2.75	"
1873. 6.68 "		1878: 7.35	"
1874. 9.62 "		1879: 2.96	"
1875..4.92 "		1880: 6.43	"

L. DUNNE,
Sergeant, Signal Corps, U. S. A.

Mortality in New Orleans from June 19th, 1880, to July 17th, inclusive.

Week Ending.	Yellow Fever.	Malarial Fever.	Consumption.	Small-pox	Pneumonia.	Total Mortality.
June 26	0	6	20	0	4	115
July 3	0	5	10	0	5	112
July 10	1	4	12	0	5	99
July 17	0	6	11	0	2	100
.. ..	.....	.....	.....	0	.....	.....
Total....	1	21	53	0	16	426

NEW ORLEANS

MEDICAL AND SURGICAL JOURNAL.

SEPTEMBER, 1880.

ORIGINAL COMMUNICATIONS.

Chartered Brothels; or, A Plea for the Regulation of Prostitution.

By GEORGE L. BEARDSLEY, A. M., M. D.

The sexual impulse is, of all, most exposed to profanation, and though the guises of its perversion have not been constant nor uniformly repulsive, this instinct has and will ever hold high carnival from the peasant to those of royal ancestry. Libertinism is an ancient graft. The earliest writings tell of man as the gudgeon of his amours. The literature of every race—particularly its fiction—is streaked and bewitching with lickerish intrigues. Its savants have often been confirmed lechers. The seraglio of Solomon, the pyramids of Cheops built by rakes, the wenching of Cleopatra, the whoredom of Cæsar, the impudicities of Messalina, the indecencies of Heliogabalus, the lusts of the Medici, the shameful harlotry under Louis XV., all these are concessions of history to the spells of the Paphian goddess. In every age Don Juans and Jezebels have multiplied, so that to-day the love for easy virtue is so well nigh unanimous, that its rapid expansion annihilates every sensible faith in a speedy dawn of the promised reign of purity. Christen this propensity as we may, an animal relish, a beastly sensuality, the whisper of Belial, it is too deeply im-

planted to be shamed out or routed by the most finished form of proscription. The phallus may not be perched on standard staffs and cheered in our boulevards as in ancient days in the Orient, but the same salacities are enjoyed, though hushed and cloaked in divers ways. The forbidden fruit will always be eaten—the grisette is a stable institution among us. Were this illicit companionship no more than a social misdemeanor, or a trespass on wedlock, charity for human weaknesses might suffer the indulgence to go unrebuked or to await the prickings of self-accusation as the penalty. But such gallantry is more than a peccadillo in morals—the product is a lesion, a rot, whose drain on the virility of the race is fast emasculating it—which rankles in the scion as well as in the sire. The corrodings of lust are the gravest visitation of the period and the least studied or controlled—and yet, with other diseases no more to be dreaded, the policy of interference obtains.

The importation of cholera is intercepted, variola aborted, yellow fever vigilently patrolled—pestilence of any form no longer stalks among us without being hotly chased—but a disease which lacks not a whit the type of a plague and which Upas-like infects nation after nation, contributing generously to their charnel-houses, nestles among us and travels on friction-wheels. It is well understood that the persuasive power of mercury and iodine on syphilis have been determined and its ravages made to remit somewhat. The cure of a disorder is not, however, the *ultima Thule* of our labors and aspirations. A chancre studied by the curious does not deter them from the same pitfall—the very cicatrization of the sore often inspires the timid to stand the hazard of a night's cooing with Venus, suggesting that recovery is not improbable. Hundreds are honest, ardent in their researches after some antidote to this virus, but never essay to stop or modify the evil. Prophylaxis against venereal suffering sounds to these but balderdash. To quarantine a syphilitic is passing strange. The experiment is ridiculed as if the evil was self-limited -or repudiated as contending against a dispensation from heaven, to meddle with which was to befriend crime. The stench of this leprosy already fills our nostrils, but no mettle is sounded in our

legislators to face the railings of those who hate truth and are timid at every revolution. To qualify a wrong is not to endorse it. The health and longevity of the race are paramount to the defence of ethics or rude platitudes in morals. If life is jeopardized, sacrifices are imperative. Individual prejudices, dogmas however dear, the faith of ages, all must unloose their hold when the perpetuation of a perfect species is called in question. If the arm of the law is powerless to stay the gratification of our passions, if the admonitions and misfortunes of others do not dissuade us from the same snare, if the whore will ply her vocation, is it criminal to disarm her of her sting? Is it not conniving at the practice to suffer that foul doxy to parade her goods and pollute a neighborhood? The time is nigh when this vapid sentimentalism in religion—this morality which dubs every disenter from creeds an anti-Christ, and translates the license of prostitution as free love, should be undone. The social evil cannot be remedied without some compromise. It is a monster too huge to be smothered, and we must curry favor with it, to lessen its depredations. How the best and how speedily to compound it is the moot point. The card is ticklish to play: Dutch courage is among us, and the public sentiment has worsted us in the deal. Be it so, the good of humanity is at stake and the miff of our neighbors must not outweigh duty. The impotency of the law to abolish prostitution is too patent to escape censure. It has engaged to wipe out this scandal, but the reform is not yet. The statute is unequivocal in its levies on licentiousness and insists on its removal, the police have full warrant to shut up these haunts and detain the inmates in custody, the courts can mulct or cage them with no fear of criticism—every facility for extirpating this root of bitterness is at command, and yet the business never realized greater revenues than to-day.

A paraphrase on this is easy. The police are not fined nor deposed, if they are unconcerned or caught napping in their search for whores. There is no determined nor concentrated movement against brothels as against a nest of counterfeiters. Now and then a raid is made on some disorderly house after the neighbors have become exasperated and demanded sternly

an abatement of the nuisance. These descents are limited—four a month is above the average. In the interval the traffic flourishes and loses nothing by the interruption. As the time approaches for another sally, for they come with mathematical regularity, the proprietor with the girls, if cunning, prepares to vacate the premises only to return as soon as the official intruders have quit. If a few mopies are nabbed, one dollar and costs the next morning purchases a reprieve, and they at once steer straight for the same den to greet their comrades in arms. It is of no concern to justice if these loose women continue to infect their admirers—if they only let out their smutty carols softly, or indoors by the nocturnal noon, or if collared are orderly in court, and pay the dues, our keepers of the peace are gentle with these pimps.

It is another commentary on our police system that these houses are not, after the arrest, shut up and the property confiscated. The business is tacitly recognized as contraband, else the storming of the place is not justifiable. The intent of the law seems gratified, however, if only the tenants are ousted. The building is not cleared, as it ought to be, of its appointments and its character publicly arraigned—the owner is not fined nor imprisoned for his conniving at the business. No ordinance directs the rent to be forfeited—nor are bonds set to the landlord for the healthy use of the property thereafter. The machinery of the concern is not disabled, it is merely stopped for a few days.

Once more, if these retreats were unknown to the police, or the scandalous practices reputed of them could not be substantiated, the fitful method of making arrests and the apathy of our constables on this beat might be overlooked. Such a plea has too much of irony in it, or else it is a reflection on the vigilance or assiduity of the police. If they are really blind to the universality of this vice, or are unapprised as to the latitude and longitude of whore-styes in a given ward, is it not a marvel that they are so acute in their sense of smelling out other sinks—as the ambuscades of theives, panel-houses, and the lurking holes of faro? A reward of a few hundred dollars insures the capture of a forger, or mail-robber, or a cracksman,

and the discovery of the whereabouts of these parties is made with speed and ease, and yet to clinch a prostitute or to map out her route is difficult, we are told, from lack of acquaintance. This kind of extenuation is quite cox-comical. The police do not bungle, or are not deceived in this exercise of street-surveillance because of any real incompetency. These resorts, though not entered on city directories, are known—the numbers freely mouthed and in some newspapers prominently specified. A bed-house is easily differentiated. The police do not want to be advised of these places, and if they are, wriggle out of a confession or flatly perjure themselves to any knowledge of such a spot. A solicitude for personal popularity and the dread of out-Heroding the general indifference of the public to the gravity of the evil, continually impeaches the efficiency of police-measures in docking this kind of speculation. In every device, it is too patent that legislation on this subject has been hollow; not that the ordinances have been controvertible nor their spirit sickly, but like all codes they are worthless unless seconded by a manly sentiment. The laws on this sin have never been avenged and are in no way to be. In some other channel are we to repose for its qualification. To determine what this ought to be is the caption of the balance of this essay.

In the aniversary address by Dr. Sims at a recent session of the American Medical Association this subject was ventilated and "license" cried down. The author's substitute is to refer the control of prostitution to Boards of Health, who shall have the power to root out the syphilitic in every city, and ship them to hospitals, like small-pox patients. The plan is too ideal. No such committee has the facilities for unearthing this fraud on society: and, again, though the immediate danger to life from the several contagious diseases stimulates every health-officer to check a nuisance, to arrest a whore because she may circulate the "pox" would be generally estimated as high handed, a strain on law, and the winding up of the business would not be insured better than under the present special statutes.

A Board, to control prostitution, could do nothing unless by co-operating with the police, and then the same embarrassments just reviewed will start up. They succeed in driving other pestilences from our borders, because the public and the Board are in sympathy. There exists no need of instruction on the necessity of quick procedure in these cases. The demands of society for quarantine are absolute. The Boards were not incorporated until a sentiment on hygiene had been cultivated and other, though feeble, adventures at reform had been made. The lines were all in the hands of the Boards when they started. Not so is it with the social plague. This does not slay fast enough, nor in bulk, to alarm a community. It does not make the air or water unwholesome. It breeds its damnation in secret. It comes by invitation through avenues that can be closed to it whenever a community firmly frowns on it. Worse than all, this kind of a pestilence beards the detective oftener than any other plague. This prompts another stricture on Dr. Sims' plan. The control of the prostitute by health officers is not a proper corollary to their successful experiments in fishing up the other varieties of contagion. The law suffers these Boards to hunt for yellow fever or small-pox patients any where—lets them board a vessel, open the door of a private dwelling, and remove the unwelcome tenant—on every occasion aids the sanitary police in procuring and examining evidence. There is in addition no duplicity among the crew nor in the household, no motive for dissembling the real situation; the patient has nothing to gain by sharp practice with the inspector, but rather imperils his life by avoiding the search. Even if on some points of sanitary reform the Board is autocratic, the public approve the iron rule. To institute the same sort of severe discipline with the prostitute is, however, a procedure decidedly irregular according to our notions of the limit to the authority of society over the individual. Whores have the same rights of person as the undefiled and cannot be approached as outlaws, unless caught in crim. con. or found in some stew. These dissipations, moreover, are not limited to these places. Their trysting places vary at their convenience and are arranged without many prelimi-

naries. To track the lewd woman in any of our cities in the engaging hours of dewy eve would consume the time of treble the number of police on the force and would reach results equal to the labors of Sisyphus. The police have always been authorized to capture night-walkers, if their solicitations offended the quiet or order of the streets, but the class has suffered comparatively no loss in numbers—nor have they despaired in purpose. It is a real poser, often to prove evil designs against all this folk, and their detention is not without risk, as the evidence is seldom direct, and as every species of machiavelism is forced into service. If to the arrest there is added a sentance to a Penitentary Hospital, those who remain at liberty will continue disseminating the poison and will in time receive reinforcements. The police may shut up one, but ten will cog the dice or slip the manacles. Even if punishment for the crime is not defeated, this is not enough. The law may be propitiated, but the interests of humanity are not set at ease. The whore must be stripped of the power to propagate mischief, as well as made to pay redress for her insults to decency. This can be insured by a policy of recognition—that is, some measures that aim to restrain an evil that it cannot suppress.

It is hardly controverted by intelligent philanthropists, that prostitution can be somewhat modified or its phases made less hideous. The provisions for its limitation in force in Berlin, Paris, Vienna and London have been prospered so positively that the propriety of the tactics can barely be gainsaid. Yet the control of the same practices is an apple of discord among us.

Amelioration of this class is branded on this side of the water as license of the wrong, and the sincere utilitarian who would disinfect these sinks of corruption is at once satirized as a *fautor* of the *femmes galantes.* The difference seems unappreciated between a statute that tolerates a vice and lays no embargo on it, and another that, though it concedes a reign of sensuality, prescribes means to weaken it. To regulate a disorder is far wiser than a bootless project to banish it.

The same logic rules us in our dealings with other diseases.

The let-alone treatment is seldom countenanced. Puerperal fever cannot be excluded from our hospitals, but it is never suffered to decimate a ward; the strictest watch is instituted at its *début* and a most vigorous combat kept up with it while it tarries. The fever is tolerated, yes, licensed, if the word may be borrowed by analogy, but it is at once shorn of its power—or attempts are made in that direction. No such charge of connivance is ever hurled against the staff because they could not forestall this epidemic, and yet conformably to the species of argument wielded against a surveillance of prostitution, the same slurs ought to be tendered them. It is time that this sophism about fostering licentiousness by the "contagious-diseases act" was rent, and the hypocrite in morals discouraged in warring the truth. It is not for the sake of frail sisterhood that humanity is pleading. Society must recognize the rights of the respectable, as well as their health and safety, the comfort and endurance of their issue. The vigor of the race is continually outraged, and the purity of being every day invalidated. It is for the class who are indirectly suffering from the transgressions of others, that this new departure in philanthropy is intended.

The recognition of prostitution means the protection of the good, the weak, the simple, not the whore—(though it ultimately would inaugurate a relief for her). The license laws which are in force in France are unnecessarily generous and perhaps stimulate a little the exercise of the passion. The "contagious-diseases act" of England pre-supposes a standing army—an enlisted marine corps and special government troops. Neither of these two appointments can be grafted into our body politic. A mid-course is quite possible. The misfortune of each can thus be shunned, and yet the principle repeated. The sanitary control of the prostitute means no more than a medical surveillance of her. The other features of the bill must be so shaped as to be subsidiary to this notion of the necessity of physical inspection and treatment. These examinations have no concern in fastening the guilt of the party, but are for the cure of the disease. These are to be conducted periodically and with method. Each operation must of course

be governed in a decorous manner, the feelings of the individual stung no more than justice to the case may ask, and never in the mode of a clinic or public review. If the inspection is performed in a special room, before the medical officer only, at a convenient hour, and without beat of drum, the regulation will be rid of every demoralizing tendency, shirking will not be common, and no disgust will be experienced by the examined or examiner. It is affirmed by the opponents of this bill that this practice will not succeed through the fear or repugnance which the women will manifest at the open disclosure of their condition—in other words that every inducement is volunteered to conceal their filthy parts and escape the hospital. This kind of reasoning amounts to nil when made to those who are familiar with the scenes at clinics or hospital amphitheatres. There are numbers here who innocently suffer the rot that is on them, sinned against, not sinning, who, in spite of the exposure or sacrifice of their modesty, gratefully accept relief at any price of chagrin. The inmates of brothels are not, as a class, of a peculiarly tender coyness nor easily nauseated by apocryphal addresses, and it seems a terrible violence to good sense to fancy a *levee en masse* among whores, because their person is invaded for the benefit of their suitors and under the auspices of a special science. This criticism is not sustained where the law has operated. The majority submit to registration with few compunctions; and, notwithstanding the many formalities attached to the process, undergo the inconvenience and loss of time in being enrolled. The exactions of the license are quite severe, and the penalities for disobedience are executed to the letter. Yet the list of applicants is not abridged. In those cities where the policy is favored, the duplicity or evasion of official inspection is a very small factor of the equation. This is easily unriddled. The prostitute can suffer nothing by the revelations of her situation, save the fee or hospital detention. Her business is not curtailed, nay, she is a better candidate for a voluptuous embrace, because of receiving a card of approval, and is more likely to win a profitable customer; again, she is less an object of disgust to herself, or a jesting stock

among her peers, for even among whores, particularly those of upper rank, the charms of the boudoir and the dainties of the toilet are not forgotten. There is absolutely no motive for declining, but a good deal to be gained by registration. Instances are given where women who have never cohabited with a man, have petitioned for a certificate of soundness preparatory to entering the profession, and have wandered forth, in quest of a victim with this for a bid. This is not passing strange. These were forced into inscription by an inability to find a living in an honest path, they debauched themselves to escape the pangs of hunger—they built no bower of erotic bliss, but uncovered themselves for a morsel of bread. Three-fifths of our fallen women do not indulge their sexual instincts from choice as from necessity. This class, then, certainly can have no wish to disemble disease, can profit nothing by refusing its correction, and most assuredly can afford the sacrifice of their sensitiveness at a bodily exposure before a medical authority, after having auctioned virginity for a few ducats to the passer by.

But it will be urged that with the other division of this class, that is, the rejected, the seduced, and those who are the vehicle of vice by preferment, the policy will be resisted because of the indifference of these to their foulness. The rejoinder is this, that it is not their due to be consulted as to the convenience or need of examination. These have elected a service to immorality, have not blindly taken the issues of infamy, have by some claim, however untenable, justified to themselves this fraud of wedlock, love the life *per se*, and it is for them to pay tribute for the indulgence. They have leaped from virtue, though there are many that make the descent gently with a look at the pitfall, and they must not murmur at the consequences; a forfeit is the condition of exchange, and it is theirs to accept the terms, not to name them. Registration for these must be compulsory and, if dodged or denied, must be vindicated in the proper way. The difficulties in the way of detection are far from being as insuperable as is pictured. The women not unfrequently tell on each other, the soldiers or civilians who have been infected will be tempted

to complain to the Bureau of the unregistered girls, the proprietors of houses of ill-repute will discover it to their gain in visitors to keep this merchandise sound and to report disease by way of popularizing the brothel as a safe retreat; the fear of a fine or penitentiary discipline will operate to make the regular members of the troupe in every dress-house register, and the same tactics with the clandestine or isolated prostitute will succeed either in circumscribing this sort of trade by frightening the timorous, or the juvenile among this class, into more quiet quarters, or forcing the more courageous into some lupanar where an examination cannot be avoided. In Paris and other cities where these regulations are sustained, the medical police are not fettered as to exercise of authority by special opposition. There are classes, it is true, the lorettes of nobility, and not a few who are the scum of that society, who give leg-bail to any officer who may hunt for their credentials. The advocates of this system have never presumed on its uniform success, nor the special attachment of concubinaires to the importance of the measure. That it should fail with many, is expected. It is a marvel that it reclaims and restores to health the numbers that submit to registration. In the several cities the gain for every year has been positive; the clashing has been trifling, and voluntary inscription become genteel. The inspection must be directed by a surgeon who shall have commission to make or prescribe arrests for any violation of the laws peculiar to the procedure, or delinquencies or refusals to appear at the time designated. The corps of managers should be medical entirely. It may, of course, co-operate with the regular police, and depend on them for support in emergencies, but the conduct of each visit must be relieved of any mien that looks like a harsh assumption of power. No bashaw must be allowed the office. The authority must be kindly utilized, so that the examined can discern no other than a sincere purpose to heal the sores her lust has bred. It is a mission of purification, repair, mercy to the body, not a wily or deep laid plot to confiscate her person or to damn her by objective evidence, and she must be taught so to receive it. Once satisfied that she is to suffer nothing by the disclosure,

and all collusion or collision between the officer and his subject will be without warrant, and not to be feared. Were this understood in our houses of accommodation, and no abuses of the principle tolerated, the worth of the system and its success would no longer be impugned. To the task of reviewing the lodgers and clearing the sound, it should be enjoined on the police to insist on cleanliness in the establishment. Bath-rooms must be provided, and lotions or disinfecting preparations are to be supplied, where visitors may wash on their departure from the debauch. These precautions are urgent, and compliance with them can be made easy. The necessity of these attentions to the body should be presented to each case in a way to be appreciated. The surgeon can, with a trifling waste of time and an economical arrangement of words, explain to his patient the real character and moment of the disease, its sequelæ if not mastered, its contagious peculiarities and the therapeutical action of the medicine recommended. An occasion is then offered to scatter a few seeds of kindness, to invite back the love for purity, virtue and peace, to speak promise of pardon to the truly penitent, and to lead them home from their wanderings. Here is a field which might well stir the philanthropist to enthusiasm, and if the grace and fervor of a Howard can be re-duplicated in the attending medical officer, good may yet be made to come through him out of this Nazareth.

The value of this appeal to the reason and emotions of the fallen woman cannot be overweighed. Few, if any, ever divine the peril to their health or longevity from their practices; they are blind to the penalty the abuse of sexual commerce or its promiscuous repetitions make on them; they do not measure the possibilities of the disease or through naive ignorance protest against its illustrations as the phenomena of other maladies, and usually are of a moral sensibility that was never tutored or expired early.

The second point for notice is the provision of special venereal hospitals for the diseased women. This feature of the bill has already been shadowed forth, or is a corollary of the proposition just discussed. The dispensary mode of disposing of these cases is far from satisfactory and, if the regulation merely

requires the examiner to prescribe medicine or send the sick to some neighboring clinic or lecture room for treatment, the particular service of this new legislation will be lost. If the inspection is to succeed, an institution similar to the London Lock Hospital must be founded. In such an asylum the medical care of each case can be directed with accuracy, shirking is impossible, the healing can be insured, attentions paid to the diet, habits of personal neatness encouraged, and the patients instructed how to work, stimulated to be emulous in their industries, and aroused to a conviction of the folly of their ways. The asylum must be distinct, that is, the admission of venereal patients into our civil hospitals indiscriminately must cease, and a particular quarter be reserved for them. The urgency of some such provision can hardly be discredited, even by those who resist "tolerance laws," when the registers of our hospitals show so rapid an excess of this class of applicants, an increase which will ere long call for special accommodations, if not select. In most of our hospitals, wards are assigned to those suffering from these complaints, the beds are all filled, and in one or two of our leading cities a separate wing is retained for them. But allowing that this distribution of rooms to venereal patients is by law required, it remains to be proven that the appointments are fit, the medical surveillance thorough, the nursing agreeable and efficient, the ministrations to the mind as well as to the body earnest and constant. This cannot, of course, be substantiated, and the failure is not to be credited to any marked neglect or stoicism from the staff or warden. It is just what is to be expected from this system of gregariously mixing patients with every conceivable lesion under one roof. Representatives of every clime, nationality and sex, are in these asylums packed away for clinical material, stored up to feed a hungry crowd of students. The examination of the patients is as public as an auction, and the chief of the clinic seldom lets slip a chance to cut some joke over the unveiled mysteries he exhibits. The indelicate ways of showing chancres on females in St. Bartholomew's Hospital, England, for a long time disgraced the clinics in that institution, and the same weakness can be detected to-day in the

wards of American hospitals. The moral regeneration of a harlot in such an atmosphere, which all contend must be attempted, is about as probable as to hope for a diplomatist among the Saki Indians.

But the treatment is not the only criticism to be passed on the general hospital in its relation to prostitutes. The laws of these asylums virtually forbid the admission of any patient who is not seriously incapacitated by his or her disease; they give no shelter to walking-cases of syphilis or gonorrhœa; society is not protected against these; they prowl on our streets, laying snares for the unwary and strewing their corruption, but it is just these loose fish that do the most damage. The trollop who is so putrid that she is forced to a hospital for relief, whose skin betrays her, whose bones crumble at every step, this one no longer adorns the temple of Venus Vulgivaga, and circulates less venom; her charms are waning, her caresses are repulsive, her bosom deserted, she is of little harm, as few want her. The other—the able bodied, as the dispensary registers it—leaves the room with a recipe or a bottle of medicine. Her observance of instructions hinges on her whims; her recovery is provisional; she will get well, if she only happens to feel like taking the syrup, and the chances are against her that she will; five to one that this same character returns six months from date with the tertiary evidences of pox, all of which could have been forestalled by quarantine.

The "tolerance plan"—if it may so be labelled—proposes to deal with every case; it does not wait until disease has reached its acme or has spent itself beyond concealment; it would make the germ abort, or quash its evolution; it befriends the new-fledged as well as the confirmed in sin. A special hospital has every advantage over the general. The conveniences can be increased, and the comfort of the patients more certainly cultivated; a personal interest in the several cases fostered, less publicity given to the misfortunes of the individual, the impressions of the medicine more closely and pleasantly studied, and that which is the cardinal gain, patients in every phase of the disease, those in whom it has just announced itself, those on whom bare suspicion has alighted, can here be

quartered to await the development, and thus kept from inoculating others. In cities where the system is countenanced, the surgeon once a fortnight inspects every brothel or house of accommodation. The inmates are enrolled, their residence numbered, and a record made of their dress and physiognomy for identification. The inspection is made in a room selected for that purpose, or behind a screen, before the officer only. Those that are free from eruptions or discharges are acquitted or passed with a certificate to that effect. The others are transferred at once to some hospital set apart for their reception. Here the candidate removes the civilian's dress which is disinfected or aired, and the ward-suit is donned after a hot bath. A bed is given to each, the linen, table-utensils and wash-basins are all marked and kept distinct. The women are reviewed every day, the speculum being used in every case with topical treatment, the parts are in addition washed by the patient several times a day with antiseptic compounds. A sore of any grade is at once cauterized and usually a mercurial inunction employed. The utmost pains are taken by the matron to keep the patients tidy, to make the ablutions thorough, to protect the clothes against the fluxes. A personal supervision is exercised by the lady in charge, the medicine is administered at the hour sharp, the pleasant exercise of the body is required, and a certain degree of social intercourse not incompatible with the decorum and quiet of the ward is permitted. An abundance of reading material is furnished. Chapel services held on Sundays and a healthy amount of religious training are within the reach of all. Every facility is here at hand to restore health and to reclaim the erring. The patients feel at home, a sense of restraint or coercion is not made essential to the moral impression of the place, the unruly or refractory are of course to be punished; but to be cabined, cribbed and confined, is by no means the customary reception tendered every visitor. The period of detention will vary as the progress of the cure. It is never discretional with the patient when she may go. This is a decided gain on the civil hospital. In this her stay is conditioned on her feelings, her satisfaction with the surroundings, the fancies of her friends.

If the girl becomes discontented, grows uneasy, or gets homesick, an appeal through her relatives or a personal complaint of a mere slight succeeds in the issue of her discharge papers, or she can quit without giving any countersign—well or not. It is of interest to the institution, of course, that she tarry long, since she is a bolster to its clinics. But their responsibility to the public for the discharge of this courtesan in a sound state, or her keeping until her power to poison has departed, need not weary their conscience: there'll be no ado about this laxity of discipline.

In the other hospital the patient is detained until a certificate from the surgeon in charge warrants her dismissal—she is not assumed to be fit to be free until she is fit for her trade, disreputable as it is—she must be cured out and in before she can renew her solicitations or figure as a procuress. It is not uncommon to find many, even those dyed in wickedness, regenerated under the influences here assembled, starting a service to chastity. They go forth to be no longer hirelings of some gay Lothario, or prodigals from a father's roof, but reclaimed and purged of their pollution, to wipe out the old score by the pursuit of godliness and a labor of love to those unrescued. Thousands of fallen women are in time absorbed into the ranks of decent society and become steady and useful, the ennui of the life becomes to them insufferable, and if only some promise of forgiveness is whispered to them, as is the spirit of these asylums, they might early become new Magdalens and change that legacy to their issue, which is so sure to condemn them.

This feature of the bill, the founding of a special hospital for these cases, will at once be carped at by the churlish as an increasing tax on the charity of the people. Hounds are every day, they say, running down the chancellors of our exchequer, and the rate-payer sweats under the tariff laid on him for the public good. Enough has been done for the unfortunate already, and this grant to crime is too full-handed. Happily for the prospects of the system, the projectors do not throw themselves so supinely at the feet of bounty or propose to punch the ribs of the lord of the manor. It is

believed that the institution can be in a measure self-supporting, the running expenses at least met by the handiwork of the patients, the fees laid on the examined, and a brokerage on the rent realized on these houses of ill-fame. Besides these revenues, those arrested for clandestine prostitution, or for not complying with the statute directing them to appear for examination, can be drafted into a work-house connected with the hospital and made to earn their living. Even if the current bills of the establishment are not balanced by the receipts, the cost of sustaining it will be reduced, more than are the expenses of the other good Samaritan institutions at present supported. The keeper of the brothel and the owner of the property must contribute largely to this fund, the fee must be rendered in advance, and no provisos accepted. The collection may be made every six months, and yield not less than fifty dollars for the proprietor and two hundred from the landholder. If the assessment is refused or waived, the business must be stopped and the lease revoked. If a bar is kept on the premises, a tariff must be laid on the proceeds from this. The inmates, as well as stragglers who apply for a certificate, are to defray the expenses of the process. The sum of 25 cts. a head is a fair impost, considering that the majority of these characters are not altogether insolvent; and it will be given without complaint, if it is required but once a fortnight, and as it buys their right to the business. It is a purchase of protection against arrest, and they will allow it with no whines. The tariff is not to be raised nor adjusted to satisfy any extra outlay of time or special nicety in exploration. Any steep rate or game of swindling will at once defeat the aim of the system; and, to forfend such a contingency, the medical officer must be cautioned against jockeying with or misusing the confidence of the patient under a severe penalty. The money is to be received by the examiner, who is under bonds for its safe keeping until it is handed to the commissioners of public corrections. A registry will also be kept of the examined, and vouchers of the fees given are to be made to each. As a premium for "exactitude or punctuality" at the fortnight inspec-

tion, a certain percentage on the gros receipts for four vissits may be returned, as is the custom in the city of Brussels. Here a whore of the first water pays 4 pence, one of the second class 3 pence. These are domiciled and are visited at their rooms by the examiner; the third rate strumpet is charged 1½ pence. In Hamburg the assessment tallies with the rank of the proprietor and the girls. The select may pay 12s. 3d., the next in grade 9s. 2d. In these cities the officials report no annoyance nor the use of legal remedies in collecting the taxes. The members of the profession seem to be persuaded to the value of the treatment, and find that they lose nothing in the end by quietly accepting the situation. With the right sort of management and co-operation, the chances are that the measure will be prospered in every city, even as a financial experiment.

The revenues that could be thus gathered would be considerable in our leading metropolis. It is estimated there are 10,000 prostitutes in New York. Of these 4,000 may be counted as clandestine, that is, a class beyond the pale of a practicable search warrant. This proportion is exceedingly generous. The remainder, or those that are housed, can contribute according to the rate proposed—$36,000 annually, or discounting the runaways—$25,000. Allowing 7 girls to each brothel or house of introduction, as an average equipment, there will be at the smallest computation 500 keepers who should pay $50,000 license tax. The owners of the building will add to the fund not less than $40,000. The proceeds will easily reach $110,000, from which the salaries and dispensary expenses are to be deducted, leaving $90,000 as credit to the asylum. No other system of public comfort and hygiene proposes to provide for its needs as this will. Every institution for the relief of suffering, with a few exceptions, makes an unlimited drain on the charities of the people. Here by contrast is a policy that propounds measures for the amelioration of the direst scourge under heavens, that are somewhat self-sustaining, which insists that cronies in sin shall be helpmates in distress, that those who suffer through folly must not saddle their aches wholesale on the pity of the

prudent, but call on their partners in vice for deliverance. It is the custom with other fraternities; why not with this?

This taxation on the business will operate to abridge it. Not a few of the proprietors will discover it unprofitable to pay so heavy a license and will leave the field. Those who rent the rooms will often decline another lease, as the percentage on the receipts is too heavy. Thus indirectly will this tolerance of the evil so appalling to our New England fathers in Israel be the very agent to contract it, the lever of a revolution which may in time break the power of the monster. The moderate assessment on the women will not deter those of the upper order from continuing their solicitations; they can afford it and will not feel this slight draw on their purses, as their salaries are ample. With these there can be no inclination to parry the examination. But with the lower or slighted trulls, whose wenchings are not very remunerative, whose seasons of satisfaction are quite irregular and distant, there is to be sure greater presumption that the fee will be refused. The uncertainty of forcing these women into inscription has favored the rise of not a few misgivings, even among some disposed to the legislation, as to its success. The phases of the pox are, it is advanced, the most hideous in these quarters, and it is just here, where there is the greatest need of scrutiny, that taxation will not be borne.

Before this inference can be valid, the data must be sifted. It is the poorest sort of generalization to insist that poverty is the apology for the prevalence of venereal diseases in the low districts of our city. It can be more rationally imputed to ignorance, or a contempt for nature's laws. Even among the opulent there are scores of syphilitic patients, who would not have suffered as they do, if a well lined purse had been any protection. They never estimate the possibility of conditions to health; their perceptions of disease refer its manifestations to a law of casualty. There are hordes among the poor, who wallow in the dirt not from the coercion of circumstances, but because it is congenial to them. They cannot reason from debauches any insecurity to their physical comfort, petty as that may be; they make a law unto themselves that free love

is not criminal; they are not whores simply because they are poor, but by election and thro' darkness of mind. When these get singed and apply for relief at dispensaries, a streak of shame may run thro' their revelation of secret troubles, but seldom do they show any concern about the real meaning of the disease, its combustible quality, and look on it, barring the peculiar annoyance, as no more grave than a cold or bruise. It is lamentable to read the ignorance of the pox-pauper, but it is surprising how eager the majority seem, when let into the mysteries of their suffering, not only to be rid of present smarting, but to get some medicine to protect them from another scrape.

In this connection a few personal observations made on "charity-counters" a few years since, while in service at the bureau for the sick poor of New York, may be noted, as they strengthen this feature of the bill, viz: that a whore, however poor, will contrive in some way to pay for inspection or treatment, if she understands that it is for her good. The cases in the room were registered as surgical, but very frequently disclosed venereal complications. None of them had the remotest conception that there was a virus in the discharges, much less that it could be absorbed, had never heard of tertiary products, and the explanation could not be rendered clear to them without demonstrations. But not a patient who intelligently grasped the real significance of the sore refused cauterization or failed to present at the hour or day named on the green card, and were anxious to remunerate me for special attentions given to the cases. In some instances catheters, bougies and syringes, were purchased by the patients, as these stores were not furnished by the Commissioners, and brought to me for instructions as to the mode of using them. If it had not been a law of the Bureau prohibiting perquisites from patients, the contributions which could have been received would have paid many of the bills for supplies in that section. All were earnest to get cured, and could have raked up a shilling every day, if it had been required for the examination. Scarcely one left the room without asking me with candor if they could not be vaccinated against it. These were, notice, the fairest specimens

of the shiftless, the unfortunate, the penniless in the city, and yet I am convinced that a small fee would have been faced by them and the cash raised by pawn or a bargain, if not from wages.

The cost of treatment for venereal lesions has become so heavy, the prices so exorbitant, that thousands are deterred from consulting a physician through fear of being fleeced. Specialists in this department make money, and the people fear them. A cure for the clap sells for two months' wages ; the common mechanic or dress-maker or waiter-girl is not able to satisfy this price current, and sooner than be stripped of their small earnings or leeched by some "professor of pus diseases," they will muzzle their moans and screen their eruptions or fly to some Rosicrucian in healing, only to be robbed more slowly and without relief. Victimized, heart broken and beggared, these creatures hover around docks and parks charged with the venom and selling their bodies gratis to all. They dupe others as they have been duped. Let once a labor of love be proclaimed to these wretches, let their eyes be opened to the peril of a persistence in their uncleanness, and let it be known that for a pittance they can be set free from their nuisance, and inscription will grow popular and will be cleared of a part of its expenses.

In several of the continental cities where prostitution is supervised, a certificate with the date and number of the examination and notes on the peculiarities of the case is issued. The card helps to identify the applicant, and protects her from arrest; it may be, in addition, a warranty to her suitor of the safety of her bed. This ticket does not license the holder to hawk her wares with any more audacity ; if she discards or encroaches on the rules for street-deportment, her exemption from correction is no easier ; the showing of the carte does not extenuate the misdemeanor. In Vienna no registry is kept, and of course no cards are given. In a few other places no record is made of the inspection, so that this feature is not rated by all as vital to the success of the movement. The holder can of course speculate with the check or carry it as a decoy in soliciting. Indeed the bearer has a right to pro-

duce it at her option, either to prove her compliance with the statute or to catch a customer, and can not be upbraided for so doing. To provide against fraud or jugglery in procuring these vouchers, the patients should be classified by the medical officer and the names posted at their abodes of love, so that an appeal or reference can be made to the entry whenever complaints are brought against them. The paramour can there find the genuine affidavit of the disinfection of his mistress, and the *chere amie* can doubly emphasize to her doubting companion her overtures for an hour's nestling by pointing to her pass on the books. If the law could be firmly sustained, prostitution would need no tickets to strengthen their canvassing for bed-mates. None would be on the street that were diseased, and the Bluebeards would make light of the checks, as the chances would be against being cheated. The procuress could not harm society, though she profaned the real intent of the certificate—more than she does now by her unbridled addresses to those she picks up. It would not be a trump-card for all her tournaments, and those whom she did win with it would not be so severe a loss to society as the repeal of this provision would be to the operation of the law. The meretricious in all ranks of life will sooner or later slake their thirst, and it is not the most inexpiable crime to arrange, that, if they will regale their tigerish appetites, the teeth of their offspring shall not be put on edge.

The bill must insist that the haunts of prostitutes, or the registered houses, whether those for lodging or assignation, shall not be advertised, or the character of the establishment in any way explained to the passer-by. The proprietor must depend on the girls to tip the wink to his business. No device nor motto of debatable propriety, no cartoon nor figure designed to attract or to hint the "free and easy" entertainment within, must be hung, pasted or nailed to the front; the exterior of the house must be clean of every unwholesome or suspicious mark, so that the pedestrian shall have no curiosity excited to decipher the hieroglyphics so common on the gates of these dens. The windows must be curtained like those of private dwellings and the shutters locked at night. The keep-

ers must be forbidden to allow the women to show themselves at the door, on the balcony, or at the windows, or to drop notes or chirp or whistle to any on the street. Everything about the places must impress the old and young, as the residence of some respectable, retired party. An order like this would be quite a step toward clipping the business. The lords and dames of brothels estimate thoroughly the profit there is in these flashy or colored signs. The more elaborate the panorama, or the more grotesque and smutty the figures, the more are these charmed. It is a sop that draws: the picture pays, it suits the old patrons, it sets on fire the sexual impulses in many who, but for that fillip, might have mastered their worst enemy, themselves. The tourist may well be startled at the shamelessness with which the *dame de maison* in some avenues of Rome flings out her gilded sign-board, inviting in the plainest paragraphs all to her *agapemone* to eat with her the golden apple. The sceptic need not cross the water to study those bawdy sketches. A stroll after nine, P. M., through the lower thoroughfares of our metropolis will persuade him that these "dew-drop inns" have posters as equivocal, as bold, as alluring, as easily spelled out as the anaglyph, *hic jacet voluptas*, was by the rakes of Pompeii.

The appointment of the medical corps of inspectors must be the nicest of selections within the power of the city or state, as the success of the measure hinges on the executive ability, discretion and unimpeachable probity of the officer in attendance. The candidates are not to be adjudged worthy of the position from any qualifications or special excellence in the diagnosis of venereal diseases solely, as proficiency in the science is not enough; the moral energy, the judiciousness, a subtlety in probing human character, the incorruptibility of the man, are to be put on the stand and questioned. Those need not apply who cannot give promise and proof of excellence in morals as well as in scholarship. The trust is too momentous, the office beset with temptations too thick, the motive of the movement exposed to such risks of profanation, that the decisions of the Commission cannot be too impartial or critical. The least suspicion of the exercise of favoritism, so ably sus-

tained a charge against the Board of Trustees of our public institutions in these days, must be aired and tempered with the justice of an applicant's claims scored against the committee to the suspension of their verdict. To encourage the right sort of officers, the salaries must be full enough to indemnify the surgeon for such sacrifices of time or reputation as his vocation may cost him. The tardy advance, which has chilled the zeal of the friends of the system, is accounted for by the small wages paid the examiners. A fair brokerage is the best whet to business. A wholesome salary in most callings comes back to the boss in quick sales, and the principle of like for like, pay commensurate with the work, obtains equally in the case pending. The successful practitioner has no right morally to quit this hard-contested round of business for that which is less remunerative. The position is one also, by its very nature, odious and disagreeable in its requirements. It cannot then be properly filled unless there are some inducements to countercheck the disgust it would stir up among the querulous. The berth of health-officer or port-physician is seldom disgraced by acts of villainy, or its functions ill executed, for the reason that the stipend is so handsome that men of superior talent and rank can afford to relinquish a common practice for this, or to combine this with it. If the prosperity of this measure can so easily be interrupted by the malfeasance or incompetency of the examining surgeon, and if this method of curbing the sin is worth anything to society, it is sound ethics that the best services are to be secured and well recompensed. The salary is, of course, to be shaped to correspond to the character of the work according as it is confining, knotty, or scattered. In Paris the fee of the head surgeon is in the neighborhood of 150 pounds, and his assistant's considerably less. These are distributed as one for 297, each makes 213 weekly visits. The pay in Bordeaux is about 150 pounds, and there are 4 surgeons for 550 women. In Marseilles the hire is small. At the Aldershot Lock Hospital the salary is 300 pounds with no perquisites. The pay at these and other stations is too inadequate, even when largesses are allowed. In most of our leading cities police surgeons are appointed for the several districts.

An office like this, in connection with the institution under discussion, could be founded in every precinct, and the visits limited within this range. The number of houses should be catalogued and bi-weekly inspections made. The usual duties of the police surgery of the division and this special service could be entrusted to a single individual, whose engagements should never be other than official. The support of such a functionary at $2000 or $2500 a year would not be a high-handed extravagance, and a premium would thus be on change for a strenuous and expert worker in this field. The arrest and confinement of a whore on the street, because of the probability of her intentions in case no card is presented, is a principle in the continental law on this subject.. A process like this can never succeed among us; a seizure on suspicion is in bold antagonism to our notions of personal right or security. A general warrant to arrest any and every woman feared to be adulterous is extra-judicial. There can be no power instituted by virtue of which an evil-disposed woman can be stopped on a thoroughfare, so long as her demeanor is quiet and unobtrusive. The courtezan has an equal right to the freedom and swing of the street as a Sister of Mercy. No officer can serve a writ on a trull, because her business looks disreputable. It is not to speculate on the design, but to discover the deed. The maxims of civil liberty, as understood among us, prohibit the arbitrary interference with any citizen, male or female, provided they are peaceable. The lecher and minx have personal guarantees, which are not forfeited until the cause against them can be made probable and a definite act of fornication fastened on them. It is no crime if they bandy amphibolous proposals in masquerade. They are suffered to cheat the vigilance of justice until they are caught in relations of open shame. The criterion for registration known as valid in Paris and other European cities cannot, then, be accepted and fused into our code of civil processes. It would be extra-governmental to deny to a woman, because virtueless, the privileges of the street, as is the case in France. They have the same right to the day-delights of a walk, as between 7 and 11, P. M., their favored

season on the avenues in Paris. The liberty or free range of the highway cannot thus be impeached. No commentary can be made on their promenade until it grows odious. The mode of dressing is also of no concern to the executive. It would be a dictation equal to that of the tyrannies to forbid a harridan to plume herself. The apprehension of a harlot, because she was not simply clad, or went bareheaded, would be even more than the elevation of absolutism; it would be a commendable occasion for resistance. The *filles de joie* are never humored in congregating. To walk in groups is a penal grievance. With us the freedom of communion could not thus be attacked, and any such statute would stand as an indignity to a primordial right. If three or four lewd woman choose or happen to pace the streets in company, they cannot be disturbed more properly than a quartette of dice shufflers or shop-lifters. Their designs must be argued as innocent until contrariwise established. The only defence of police intervention with whores frequenting the streets or parks that is fair, is the protection of civilians against the brazen solicitations or rude familiarities which are a part of the tactics of the demirep. The prostitute becomes at once amenable to accusation and arrest in public, if her talk is disgusting, her gestures obscene, or her boldness irrepressible. Like any nuisance, her ribaldry must be discontinued. Her designs, when made so naked, are almost as repulsive as the report of the actual wenching to the tastes of the pure. The offence to society is only a degree short, but the damage to decency is enough to exact some penance. The lower order of these women are, in addition to their profession, denizens of the street day in and out, loafers in crinoline. Their persistency at corners and in alleys is aphoristic. The law looks on vagrancy as inexcusable and provides houses of correction for the prowlers. The fast girl who tenants the street, gadding from block to block, busy only in hellish cabals to wreck the unwary, is rated as a tramp and must be quartered in a reformatory. The action by law against her is not invited specially by her unchaste conduct, but on the general principle that the safety and peace of the community are easily attacked by those who lie fallow. If she had

not been a loafer, an obstruction on the sidewalk, a policeman could not have locked her up, though his knowledge of her libidinous machinations was positive enough. A punk or a bawd may be strongly mistrusted, but bare suspicion cannot prosecute them. It is only on complaint *de acto*, or when caught in procuring a customer, or bivouacing at the corners, that a charge of infraction of the laws of the street can be sustained. The evidence even against a pronounced strumpet must be direct, for conviction on the item of character to prevail. No such warranties for legal interference with women who are known in common parlance as loose, can be woven into our code of government, as are respected in some Continental cities; and the sanguine, who believe that the terrors of this sin can be made to contract under the threats of a penal trial, will grow gray in the expectancy of any such forced abjuration of the practice.

A review of the field now explored must fix as sure the successful adaptation to our notions of good to the race, if they are rid of an empty bigotry, of the English diseases act. The bill in any shape, however curt or expanded, aims only at the limitation of the venereal, as the prevention of the disease is not within the pale of hope. It insists, first, on a registration of all houses, assignation or *maisons de dames:* second, periodical medical examinations of the inmates; third, the inscription of the clandestine; fourth, the detention and treatment of all acute and suspicious cases in special hospitals until recovery; fifth, the issue of a health card to those found or discharged in sound condition; sixth, punishment for every evasion of the inspection; and, seventh, the support of the institution by fees and taxes on the business. The worth of such a statute can be discovered from several outposts, four of which will now be approached.

It will meddle, first, with the extension of syphilis, laying an embargo on it that will clog it. This product of the law's operation is so premised as to barely need debate. It is of the same species as the winnings of the patrol system of other infectious diseases. Vigilance initiates the remiss of

every variety and collides with their acts of imprudence, until it alarms them to desist. The burden of legislation is but this, so that freaks of rashness or lucky enterprises in knavery are fit rebuttals of the plea that law is not the condition of a healthy activity. To deny this as the suggestion of the creation of law is not the probable produce of a sane man's generalizations on matters of equity, and in hygiene the notion is still the substratum of all the theorizings on the repression of diseases, while practically it is underrated save in the chase after a "yellow jack" or variola. These pestilences are extinguished only through the most unrelenting espionage. They fade into negativeness in the ratio of the opposition they excite. No infectious disease is self-limited nor retroactive; its continuity is never broken by any subjective force; its end is determined by direct contradiction: in short, the progress of the contagious fevers tallies with the friction they excite. The teachings of statistics persuade us to this syllogism. If, then, the reckonings of syphilis do not give the lie to the same, is there a reason why the pox should be feared as remediless a scath as it is daily hawked to be? A study of the recent labors in this field will bring to us the intelligence that this disease has already been signally circumscribed. The experiments made in England during the years 1861 to 1872 are quite valid. In some of the districts where the troops were stationed prostitutes were examined, and of 1000 men received into hospitals only 4.49 were found there from syphilis, while from those garrisons in which the women were not inspected 9.16 per 1000 men was the ratio of the syphilitic. The official registration of patients in the London Female Lock Hospital for 1867 gave as the total of admisions 877. Of these 169 were "ordinary," or, as the French couch it, "isolées"—708 government cases. The proportion of the pox among the former was 80; 41.5 with the latter, and it took 49 days to clear an "ordinary" to 37 to cure an *inscrite*.

In Bordeaux the year preceding the organization of the service (1858), there was declared as diseased 2-26 per 100 examinations; in 1866, 1.53 per 100 examinations. In the same city and year, 200 out of 406 clandestine strumpets were pronounced

as infected, and in 1866 the control had improved so rapidly as to cut the proportion diseased from 49.26 (1858) to 27.24.

The report the following year from the same hospital gave the averaged stay of a registered patient as 32.59 to 50.88 for a voluntary, from which it is to be inferred that 56 per cent. more service is required to treat successfully a non-enrolled syphilitic than one booked. An inquiry after the status of the Aldershot Hospital in 1865 determined the number of syphilitic per 1,000 as 302; 207 the next year, and January 7, 1869, the return for that week figured sixty as free from disease to eighty admitted. At Shorncliff the Act had worked so thoroughly that of 23 received the same week only three were sick, and at Windsor of 15 ordered to hospital but one was laboring under chancre. At the Aldershot hospital, before the profit by the Act was appreciated, the average detention was 36; in the first year of its appliance the time was shortened to 22.5, and ever since the period of treatment has been contracting. The progress that the Act has made is especially to be noticed at Woolwich and Chatham. Previously these were famous as the most teemful spots for the expansion of the pox. The infected were housed for eight weeks, and the expressions of the disease were notably angry. Hardly had the statute impressed the denizens into quaratine, than the symptoms lessened in malignancy and the venereal radical ceased to amplify. A late estimate sets down 200 to 300 as the community of prostitutes in each town. The same journal comments on the unfrequent renewals of diseases of the genitals among the residentiaries and indicates thirty-three days the extreme duration of hospital confinement under the Act. At Woolwich the percentage of the diseased to strength in 1867 was 21.6—in 1868, 13.9.

Taught to its benefit by the experiment at home, the English Government instituted the same ordinance in Malta, in 1861. The fruitfulness of this venture became patent at once, and the rapid perfection of the practice is now woven into the history of this island. The obscurantist, who defines inter-

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NOTE.—For the statistics enumerated in this essay the author is indebted to the reports of Dr. Domville, Jeanne, De Méric, Acton and others, as well as to the compilations prepared by the various hospitals mentioned.

ference with this sin as a fatuity, should repair thither to try the soundness of his praecognita.

The average efficiency of the garrison on this island is 5,000. In the year 1869, before the regulations were prescribed, 916 were transferred to hospitals, as manifesting syphilis and gonorrhœa. The succeeding year chronicled 689, and later in 1862, no more than 340 were discovered disabled by the venereal. At no time since 1862, has the service been crippled beyond 300 men, and on the 21st of October, 1865, when the garrison answered to 6,000 men, only 8 venereal cases were detected. A still more surprising report is rendered by Dr. Domville, that, during the years 1866 and 1867, when the actual number of sailors touching the shore was 8,000, six alone were found with an unclean bill of health. The number received into the Aldershot Lock Hospital during 13 weeks ending April 1, 1869, was 1,128. The exercise of the law had been so unfoiled that 943 met the criteria of a "pass."

The operation of the Act was decided in 1873 to the benefit of three towns, Plymouth, Davenport and Stonehouse. The admission to hospitals from this district did not reach 3 per 1,000, while from a surrounding district not under surveillance the number was 15 per 100, the disease being in the ascendant.

It is in France that the first fruits of license were garnered. The plan has been greatly impeached. Combinations the most unsalutary have been conceived against it from its rise until now, partly the product of a stolid apathy and in a measure the result of that fancy for veering peculiar to French morals. In spite of these and other jogs to progress, the principle has perpetuated itself, even with its novel machinery, to the cultivation of an excellent hygiene. It is here, where the truth was hard stormed, that the efficacy of the method became convincing. And though the special tactics made useful in Paris may not be meet for us to copy, the cause thus advanced should be credited without stint with all its earnings. The idea was first formularized in 1765 in the city of Paris. The mechanism then instituted was quite imperfect, and it was not until 1816 that the system, as now received, was inaugurated. An amendment to the original plan was favored

in 1828, by which the poll tax was annulled. The wisdom of this enactment, which the polluted state of sanitarian interests in Paris then and since excused, is ratified by the statistics. During the years 1826 to 1828, of 100 clandestine prostitutes arrested 26 were found diseased. It is estimated that this was half of the average number infected previously to the initiation of the service. In 1844, and on to 1854, the proportion fell to 19. In 1845 the ratio of syphilitic among the registered was ascertained to be 1 in 142 domiciled in *maisons*—1 in 59 in the suburbs, and 1 in 261 among those *isolées*; while one in every six unregistered was infected. Nine years after, the number in brothels sick was 1 to 176, and the benefits of the service had so rapidly extended to the class at large that but 1 in 376 was entered as a pox-patient. A decidedly interesting statement is made by De Meric, bearing on the progress made by the statute against the spread of the disease. It concerns the health status of a certain brothel of wide repute in the centre of Paris. During five years, that is, from 1862 to 1867, 109 women were examined in the house, 73 of whom were residents for 6 to 8 months, 9 for 6 to 12 months, and 27 for 12 to 30 months. The average age of the girls was 20 years. Of these 109 only 21 were observed to be syphilitic, and of these 16 came to the house sick, that is, contracted the disease during their clandestine career. Five became tainted after their acquaintance with the place. During the five years noted, but two complaints were made by the male callers, and the number frequenting was conspicuously large.

In all the hospitals the government patients are marked as showing very mild symptoms. The average stay in St. Lazare for the "registered" is 45 days to 60 days for those operating covertly; and in the Du Midi, the male venereal *maison de santé*, a contrast as gratifying is daily reported by the internes. At St. Lazare on one occassion only two of 150 patients were confined to the bed. In all the infirmaries the pox disables the registered but little, makes a quick run, if perchance it is not often aborted.

In 1858 it was established that 2.26 represented the propor-

tion diseased to 100 examined among the *inscrites* and 49.26 per 100 for the "free." Eight years after these numbers had been changed to 1.63 and 27.24 respectively. Could any truth be more stubborn than these figures make the principle involved.

In the French army surveillance has been profitable. In 1865 the system had succeeded in limiting the ravages of syphilis, which hitherto had been frightful, so that but 92 per 1000 were venereal cases, instead of 325 among English troops. In other districts than Paris, regulation has been no less useful. In the city of Bordeaux the gains have been abundant. The service was started in 1859. For years preceding, the average of the diseased had been 492 per 1000, but in less than twelve months from the organization of the Bureau the figure was changed to 418, and soon after to 272 and 203 per 1000. It has even estimated that, among the regularly inspected classes, in this place syphilis does not prey on over 22 or 25 per 1000. In a single brothel in Bordeaux licensed, not a case of disease had been found in four years, and among the "select" whores one was spotted of 500 examined—a quotation uncomfortable to those who take to the "do-nothing" policy, when measured by the reckoning of Jeannel, that in cities where no registration is expected the infected women exceed 204.

The same prosperity with little ebb has continued with the plan, as properly enforced in many other Continental cities. In Rotterdam cases of infection have been reduced beyond the most probable surmises, and licentiousness shorn of its bitterness. Among the clandestine species one in every two or three suffers from venereal complaints, and among those registered as itinerants or strangers one in four proves syphilitic, while of those whores who are domiciled or fixed residents of these disreputable inns the pox or allied affections mark but one in seven. When the system was started in Strasburg, 83 per 100 were found syphilitic, but in the course of four years, that is in 1856, 32 per 100 represented the ratio of the sick or diseased. To-day these *salons* of iniquity are limited and so far exhausted of filth as to be innocuous chambers for wilful wan-

tonness. The stock of proofs of the blessings of registration is by no means impoverished, and if the limits of this *brochure* permitted the pursuit of this principle in its exercise in every city as announced, the perusal would only reinforce the truth so earnestly insisted on in previous pages.

This much has been made sure by the statistics compiled, that syphilis and its congeners can be repressed, if not cured; and, until some better method is worked up than license, the contradictory system, "*laisser faire*," must renounce its plausibility in the face of the failures written out in history, and judged by its postulates of false sense.

The law will be of service, again, in discouraging those in the walks of infamy and such as may contemplate that career, by so taxing the sport as to make it uncomfortable and costly. When once these hiding places are unsealed and a price of admission set on them, the sweets of furtive amours are gone and the wistful eye grows cold. Had not Eden veiled her dainties, they would not have been worth the sacrifice. The treat was nicer because stolen. The girl who in her first quest for satisfaction gives up her honor in the open court of shame, sips at the cup because forbidden. It is the mystery of Arcadia that makes us tear the veil, the regale there promised, not an honest ambition to damn ourselves. There are women whom penury may force into brothels, the seduced who drink the dregs of self-reproof, the unenlightened who are sensual through some retrograde process of evolution. These can be bought off from their haunts by temptations to industry, the forgiveness of their friends, the teachings of a Dodd; but the *naive* love that frets for wenching must be so assessed as to fleece the owner. The novelty will be at an end when it can be seen at a price and as a business. The publicity of such doings will reduce the ardor of the curious to zero, and make the sport so easy to be translated as to become tame. The love-lorn will argue for the economy of marriage as against the expense of license, and for the higher gratification of their erotism on beds not labelled nor watched by the sentinels of order.

The benefits of such a statute will be further repeated when it is seen to interfere with, if not suppress, traffic in girls as supplies for brothels. The discretionary service to lust is loathsome enough, but it is lamentable that numbers are actually bought as concubines, a trade driven on them. This brokery in whores is *sui generis*, and has formularies and cunning agents. The procuress is paid a regular commission on each woman picked up, but is instructed to truckle at any cost for those whose anatomy is ravishing or voluptuousness promising. The success of these harpies is universal and easily predetermined, as the snares are so ably concealed and the prey so gentle to the acquaintance, that the nets are drawn full. The class that are thus beguiled into these dens of infamy are for the most part unapprised of the real intent of the solicitation. They are on a visit, perchance, in the city, verdant and curious, surprised and even flattered at the interest which her arrival has aroused among these pimps. Not a scent of jeopardy worries her senses. The silvery mirrors and gorgeous trimmings of the house stagger her love for the dazzling, while the wine and close embraces of perfumed admirers swoon her into happiness envied, as she thinks, by the angels. Her virtue is robbed ere she dreams the loss, and that remorse so bitter, when virginity is dethroned, crushes every proposal of conscience to leave the couch of her defloration. Her amours are fired and satisfied again and again, until her lechery becomes courageous and womanhood passes beyond the sting of shame. The proprietors of brothels are not alarmed about the defection of the inmates. There is a grip about licentiousness that slackens little, and while a rake may drink of Lethean waters until the fretting reminiscences of past impurities are stilled, a woman once despoiled, parts with that power to forget her folly and quaffs of the Circean cup until she empties it; a Vestal caught napping can no longer watch. It is strange that a law should obtain by which conscience can be cultivated so callous to immoral action, that the mere variation of sex should reverse the operation of the principle. Unrighteous as this decree may persuade us, it still remains an axiom, that woman's soul is never numb to the prickings of self-re-

proach, and that the knotty problem for her is to heal up the wound in memory that her waywardness has made green. To this torture of mind, this dancing between remorse and bitter fear of the pure, which goads the courtesan not unfrequently to a cowardly taking off, a dinner of Paris green, there is to be added the cruel treatment which these girls receive from the master or proprietress of the establishment. The allusion is now to regularly equipped bed-houses, not to houses of assignation, as in the latter there are no domiciled women, the prostitute appointing her meetings here, not boarding and lodging steadily. When the girls join the family, they are required to pay for their accomodations from the fees they exact from their lovers, often from the sums they filch from them, and a percentage on their earnings for the liberties of the house to the keeper. This regulation succeeds in pinching the girls to poverty and, coupled with a meagre and unwholesome diet, works admirably as a machine of torture. The physical sufferings that are written out in the dens that are of the lower grade are heartrending. Every sensibility is trampled under foot, and humanity fades out into darkness. The whore must accept the embraces of any comer *ad infinitum*. If her responses are feeble or frigid, a curse and a kick from the mistress persuade her to the standard or warn her to leave. It will injure the reputation of the *salon*, if the entertainment loses in fervor; if the misses demur, because exhausted by disease or the want of rest and aliment, they are whipped up to the mark under a rod of iron. In the seraglois of the *élite* no such tyranny is exercised. The residents dress and are fed without stint, receiving their wooers in parlors richly upholstered, and at seasons suited to their tastes. They are the belles of the manor and dictate its hospitalities. Life has no such spangle in the cheap harems; wenching here is a bitter sweet; the offences to the body are grosser than among galley slaves; the appointments mirror those of hell.

It is in this circle, where vice is of the ugliest form, and where the cries for rescue and the melting mood have worried charity, but brought no apostle to save, that this very law now agitated will operate to advantage. The inspection of every

establishment of ill-fame will necessarily show up cases of oppression and seduction, if any. The policy of the proprietor can be catechised and its operations sifted. The medical police may be clothed with authority to act as a tribunal, before which complaints and redresses for wrongs can be argued. Girls that are detained against their will, who are ill-clothed or poorly nourished, who have been abused in body or estate, will thus find an avenue for escape. The statute will virtually cut short trading in women. If a girl strays from her parents or guardians, and is juggled into a brothel, the bi-weekly visit will clear the mystery. Her name will be reported at head-quarters and her person removed, if it is her wish, or on the petition of her friends. If a bargain has been made on her, the procuress and other parties implicated can be arrested and fined, if the girl is vindictive and wishes to bring suit. Legal proceedings against the proprietors for injuries allowed on an inmate at his hand or from the visitors can be assisted by this system of inquiry, and petty thieving ferreted and made uncomfortable. It is clear, without additional depositions, that the two evils just expanded are within remedy, and that sure, in the law advocated. The civic police cannot fathom these intrigues as successfully. The fear of arrest and the penitentiary will scare not a few out of a confession, though their bruises belie them. The medical director, by his very title, has less of the "bully" about him, intends comfort, not a scourge, and can wind himself into the deepest recesses of these unhappy hearts and fraternize with their better longings and real experiences.

Once more, a law of this character will indirectly aid in keeping the streets quiet and respectable at evenings. It will relieve us greatly of that nuisance which blossoms after night-fall, the solicitations of prowling whores, which make a promenade unsafe and disgusting. In all our large cities this practice of hawking accommodations for the night grows bolder and the more nauseating every season. Even the snow gales and wild sleet do not chill the ardor of these harridans. A not extraordinary spectacle in the lower thoroughfares of New York is an encounter with a saucy Cyprain begging for a bed-mate long after ten o'clock, with

no armor against a pelting storm. There is a general statute prohibiting these immoral conferences, but it is and will be inert from *a priori* consideration. If the business was not illicit, it would be open. The houses could easily be found, if numbered, and crafty emissaries would not be essential. These street-walkers are no more wily nor noisy than their engagements instruct them. They are merely subscribing to the terms of their calling, and if whoring is not objectionable so long as it makes no disturbance in the neighborhood, and is an irrepressible element of society, as history attests, and is suffered to grow in every community, why should its drummers be exorcised? Every trade has its sign, and it is untenable to cut down the latter without confiscating the former. A bawdy-inn that is not registered and is operated *à huis clos*, depends altogether on its girls to circulate the attractions and invite buyers. If the place could be advertised as thoroughly in a directory or by a manifesto, the woman would have no errands on the street, and indecorous dialogues would not dirty the evening air. The law proposed will amend this behavior of whores in public, as its provisions are counter to the motives of street solicitations. A registered brothel can be easily distinguished by some special mark, as the epigraph "*maison de dames*," or some symbol. The location will be rapidly reported by visitors, so that the uninitiated and strangers in the city, will obtain the key without much blundering, just as soon as this business is licensed and it is made no more criminal to enter an inspected brothel than it is now to drink at bars where the tax has been paid. There will be no necessity of criers or female pilots on the street. In those cities where the law is enforced, the quiet and proper decorum of all the pedestrians, day and night, is marked. In Paris it is quite unusual to be accosted, and even when a salutation is made the miss does it *sotto voce*. The avenues of this city are at any hour of the night not only unencumbered by this merchandise, but echo no ribald strains nor Bacchanalian ariettas shot out from the parlors of the *fille de joie*. The lechery is curtained and muffled. This very step, so severely assaulted by religious crafts as an abortion of Heaven's policy, has been the salva-

tion of the city long celebrated as the workshop of harlots. It has eliminated smutty artifices and obscene greetings from every street, and elevated the Mall to the respectability of a private garden. It has hushed the broils that start up among jealous Bluebeards after sunset; it has arrested juveniles from these pitfalls and made petty libertinism hazardous; in fine it has made immorality less blatant, challenged any defiance to the peace of the community, justified the appearance of a woman without escort, at any hour, on the street, and made vulgar apostrophes to her perilous. The same reform is possible in every city, where the popular education has advanced enough to prefer of two calamities a lust with muzzle to that without.

The excuse for this essay at the start was the defence of outraged health against an irrepressible vice. It apologized for its appearance, because it warred with prejudices, the warps of our early moral and religious education. This intolerance of the sentiment it has constantly met. There are two objections that have not been cross-examined as yet, one of which is quite grave, if it can be sustained. An analysis of these will occupy the remaining pages. The first pronounces the registration of prostitutes unscientific, because the law does not reach the class known as the clandestine, or those who practice wenching in sly nooks, or are not regular boarders in bed-houses. The other pronounces the business, as proposed, an exoneration of the sin.

It is an error to fancy that the sly whore cannot do mischief. None who have studied the maturation of the social evil find the least warrant for ignoring the contingencies of her opportunity for scattering disease wide, and those who persuade themselves that a girl, because she is not a regular whore, but occasionally accommodates a customer, is less liable to inoculate, often rue pinning their faith to the current impression that "private stock" is the purest in brand. The severest types of syphilis are frequently studied in those whose lame defence of their debauch is the protestation of the girl that she could not burn them, as she was not common property. It is believed that the clandestine prostitute can

demonstrate no greater immunity from infectious sores than those who are notorious jobbers in this commodity; but it is a faulty conception of the power of special legislation to correct this malady and a marked garbling of statistics, to insist that those who resist registration can continue to brew this same mischief which the law promised to interrupt. *Per contra*, the act will annoy this class and make their excursions profitless, because every motive for stealthily gratifying this passion will be absorbed in the privileges of harlotry, which will then be allowed without fear of arrest. The clandestine strumpet accommodates a class who have not the courage to gratify their lusts in public houses or the income adequate to support a private mistress. Her patrons seek her services, to escape the disgrace which the revelation of any questionable place of amusement confirms; more than this, they hope to thus avoid any civil process against them, and flatter themselves they can cheat the indulgence of the smarting that usually follows a week after a lodging in an unregistered brothel. Take away the discomforts that annoy at a bawdy-inn, and the clandestine strumpet will lose her custom. She is the creature of those lucky chances which are only, because the pleasure does not always have a sting, not a feature of the business in that she cannot be spared, only so far as she is valued as the safest medium under the circumstances. The notion that this class of women who "do it" occasionally are less liable to be innoculated with the venereal, and the comparative privacy of such an acquaintance, suggest this special variety of dissipation. The presumption for their success is the risk run in the public stew. In its statistical bearings the practice illustrates the same assumption.

The city of Rotterdam for a single year presented one case of infection in seven of women regularly examined, one in five of strangers registered for the season, and one in three of the clandestine type. The health measures had been prospered so signally as to force the unwilling, or those who resisted inspection, into the sect not disinfected. The fatality of venereal for this class could not escape a proverb, and became expunged to the degree that it contracted the benefits of law, and per-

suaded numbers to quit lusts with harridans. In Paris from 1845 to 1854 the average of syphilitics among the *inscrites* was lessened each year, and for the unregistered a smaller ratio was observed, solely because the list of clandestines was sensibly cut down. In the years 1826,—1828, the clandestine prostitutes arrested were infected 26 per 100. The report for 1858 and 1866 is a fit indorsement of the point at issue. In 1858 the number of prostitutes examined reached the figure of 15,292, and the proportion diseased per 100 examinations 2.26. In 1866 the number inspected was 26,888, and the ratio of infected per 100 examinations 1.63. Now for the clandestine record. Of this class in 1858 there were arrested 406, found diseased per 100 examinations 49.26: while in 1866 of 646 arrested, 27.24 represented the proportion sick per 100 inspections. It will be noticed first that, as the list of "regulars" extended, the clandestines do not increase conformably, and secondly, that the amount of infection, so often and so energetically asserted as unalterably rife among the *non-inscrites*, was more than half made null. The same truth was exemplified at Strasburg, where in 1854 83 per 100 of the non-registered were diseased, and in 1856 only 32; and *item*, in Bordeaux, which reported in 1859 49 per 100 clandestines as infected, and in 1865 25 per 100—in each of which cities the registration of loose women was conducted after a stringent method.

To state conclusions, it is quite easy on these and other statistics to explode such a judgment, that registration is objectionable, because it announces a premium to the same sort of deviltry by the wayside. It is idle to frame the probability that the race can ever be persuaded, forced or hired to sicken at the fragrance of its salacities. The banyan days will be few, so long as man's economy prescribes nothing but an occasional quirk of conscience to make him abstain from the natural invitations of his animalism. But it is quite possible to prevent him from squandering his birthright to the last stiver, and, if he will not spend it as the law directs, or his neighbor does, to make his folly less insufferable to those who repeat his stock; and it is wide removed from sense and facts, to aver that, when measures are taken to provide the same pleasure

without any damage to his substance, he will by preference risk an impairment of his portion when needless. In no other field of activity do we find any form of loss to be the award of choice, and it is difficult to appreciate the element of that pleasure which can be extracted from whoring with a girl that may be diseased, as compared with the enjoyment of caresses which a law guarantees as free from venom.

Even though the bill advocated should be supported, it is not believed that every courtesan that has been clandestine in her practices will operate in the *salons*. The class that, by their attractions of dress or temptations of forms, are selected by the rich Lotharios and command a salary, will not be alarmed by this blow at their profession. Their dice are loaded and they will win, while the revenue of their suitors is not paralyzed or until, in spite of prophylactics, the same foul illness against which she might have been insured enters into the exchange of her amours. No law, it is repeated, can be sustained to the letter, and it is not every sanitary measure that is justly valued or worked. No contagious-diseases act can reach every girl who debauches her chastity *en tapinois*: but there can be such a law that will dock such practices of open shamelessness, or frighten them into confusion, or force them to be closely veiled. Houses of assignation and groves populated with fancy waiter-girls cannot flourish, if the entertainments there arranged are sanctioned in licensed *salons*. These institutions exist only because harlotry is not received by law as a proper amusement. The clandestine strumpet will not sue for custom against the odds of a licensed house, where a trollop's charms can impeach the looker on without fear of tipstaff or chancre.

The other objection to a licensed brothel is that it is a rupture of moral law and a monstrous outrage on religion. This same sentiment owns an idiocism "licensing shame," and has the conventional interchange of "state profligacy." There are other phases or tropes condensing the meaning of the act, but all of them unite in the idea of sanctioning sin. The *onus* of the prosecution is, that disease is a proper retribution

for every transgression of nature's statutes, God's anger at the erring—that man suffers justly and should severely, if he lets lust prevail with him ; or, as it may be phrased, God designs and intends that those who abuse or falsely use a member shall feel pain for the act, and that a measure to abort this bodily ache or its seed is a bold fling at the Almighty's wisdom and prerogative ; in short, that it is right for iniquity to visit roughly the offender and his children to the third and fourth generation. That it is right, that is, proper, that insubordination or a non-conformity to the will of the Supreme Ruler should be attended by penalty, is a truth which provokes no controversy with us. The rack of guilt is just. The iron that enters the soul of a self-convicted delinquent is driven by a power that punishes, only to persuade to better deeds. It is necessary that sin should make itself uncomfortable, and its consequences a field for remorse ; but it may be asked : Is it prerequisite for the successful exercise of moral law, that it be incensed against a transgression at a rate double of its needs ? In the light of the revealed word, an irreverent invocation of piety is the head and front of offending. Is not an eternal misery in store for that reviler, unless contrition appeases the wrath excited by the oath, a sufficient Nemesis without the compromise of the respectability of that blasphemer's children ? The licentious are declared by holy writ as unfit for heaven. Will it make the remorse of a rakish father the keener, to be assured on his admission to the nether world that the generations after him are damned by a rot whose potentiality is enormous in outline ? The one sin affects man's relations to his Maker, the other his relations to his fellow. But each is indicated and declared sufficient to merit the rebuke of the great Law-giver. It is quite possible that, in the hereafter, the penance each must pay for their respective offences will not be measured after the classification which regulates here. The sufferings, then, will not be related to chance, and will not involve the "sinned against."

Quite at variance with the impartiality of this same spirit of justice do the rulings of error operate now. The reviler does not compromise the righteousness of another by his scoffing. It

is his individuality alone that is debased. His children bear no marks of his impiety in their social status, nor in their expressions of goodness. The consequences of that oath are not reaffirmed, nor does an avenging force turn the sin to the discomfort of his issue. The grooves of time does not raze the troubles which our animal activities so often introduce to us. The circle of the sexual appetite, once expanded beyond its true fruition, and a line of evil with actual descent is started which exhibits reversions to the original sin in generations beyond exhaustion. The syphilitic taint seems permanent, and the meanest expressions of the inheritance are often the far removed. The presence of suffering of every kind, it is the apology of the moral teachings of the day, is the vindication of some offended obligation to the great will. Had not our progenitors been wanton, no penalty of pain would have been sustained; that is, a divine law insists that, in consequence of certain demands on the race having been resisted, sorrow and sufferings must be wrung out of every representative during this probation.

The query now is in time—is it right to break this seal of God's displeasure with us? It is not yet in the domain of proof that disease is the special mark of the Almighty's condemnation of sin, and that pain cannot be expunged from the discipline of Providence without a full rebellion against God's government of us. To hold to such a persuasion as Cotton Mather's it is important to be sure that the reign of law is not universal, that man who differs from the brute in accommodating means to ends far off is the only agent in nature that knows an order in his relations, and that this plan regulates only the soul's acts and states, or, abbreviated, that it is merely our cognizance of spiritual phenomena that respects any system of action. It is false, beyond pardon, to enumerate the elements of consciousness in us, as exceptionally blessed with an adaptation to an end. All forces are systematized, physical and psychical. Nature is no more than the compilation of energies related to an end. Law is none the less so, because it is not always uniform. The brutes are equally governed by law. It is for the end, but there is an order in the conditions of their being and the disposition of their activities, and it is never set aside.

Life in all its factors and equivalents, in every production of motion, works by system. The laws of disease are as properly ordained as the law of reflective thinking. They constitute a scheme independently of the emotions and the judgment. Sickness, decay and dissolution operate on the animate of every order. It is the function of being to grow and decline. The dog suffers rabies and dies. Is it because his Creator is hard set at him? Such an impression, shared though it was by the early pathologists, is born only of myth literature. The brute and his master come, continue and cease to be by a process whose phenomena appear in succession, with certainty, of necessity, and with reference to an end. The rise and growth of the body satisfies all the criteria of a governing principle. The muscle expands, the sinew strengthens and the nerve re-duplicates the series of vibrations, undisturbed by the moral progression or decline of the person. The parts of every organism, whether they promote the integrity of the whole or no, act consistently with a prescribed order. All of its adaptations are the correlates of a law. The physical part of us affirms a law in appetite. So long as these propensities are wisely directed, they make us experience only pleasure; but let the degree of their intensity rise, or their power to impel reduce our reason, and the strength of nerve and sinew withers. Whatever the excesses of our animal appetite, they own an authority, and in all their rashness appeal to it. A law is given to a diseased impulse, and its display is just as proper as though it were healthy. Its expressions may not be comely, but they are the rulings of a force beyond the control of the individual, the exponents of an order which shapes our activities. The passions are as much a part of our energy as the blood, and to disown or curse the former because deranged or abused, when they are so fashioned as to continually contend with reason, is as sensible as it would be to refuse to abort a turbercle through fear that it might encourage some person to invite consumption by living counter to the code of health.

If the protection of the public against syphilis amounts to a palliation of the vice, the same charge of compromise with evil can be raised at other philanthropic endeavors among us. Why

is not an inebriate asylum a compliment to sin? Why do not physicians, by treating insanity as a disease, become the foster-fathers of madness? Why are not our hospitals, by sheltering and comforting the illegitimate mothers in the throes of labor, countenancing easy virtue? Why is it not criminal to eradicate scrofula, if this disease is, as once taught, the special exhibition of anger against evil? How are we justified in cutting pain, since it may have some moral use, possibly contribute to a reformation in character? If all this distress and irritation of body is in evidence of the scheme of redemption, and can be determined of man's moral liberty, the cure of disease is a direct negation of the solution of pain as the ultimate end of contrivance. If the proposition is true, that imperfections are so designed that the various incongruities of our animal frame shall somehow teach the goodness of the Creator, that every ache is a salutary infliction, an elaboration of some nice element of conduct, that we are made sick so as to prepare for another world and to leave this with less reluctance, how can man dare cross the purpose of the author of nature by ignoring the offices of disease? If the origin of pain is to be ascribed to the course of evil, and if it is clear that in the uninterrupted expansion of the radical sin there is a provision for man's good here and hereafter, it is gross impudence to put obstacles in the way of the free exercise of the principle. Had primeval man never sinned, decay would never have visited him. The extravagance of such a conception is reflected by the law of rise and fall, directing the less animate objects of nature, whose capacities for evil are reduced to the scale of naught.

With deference to the common conclusion that the end rarely warrants the means, and conceding that, in the philosophy of natural sufferings, there may be some notice of evil, it is yet urged that whatever contributes to the major good of the race, scatters comfort, breaks the tenacity of sorrow, parries impurities, snaps the thread of the heritage of evil, and saves the flower of age from blight, is a proper instrument, whose benefits far exceed its contingencies of doing harm. The regulation of prostitution furthers the highest good of society. It befriends the physical welfare of the community. It is framed as the

best expedient to avert the misery which licentiousness is sure to spread. It does not smile upon the sin; it recognizes the vice as hopelessly past mending. The irreversible laws of passion and the constancy of excesses make every hope to check libertinism a figment. No arbitrament is at hand.

Either the race must be suffered to run to rot, to disappear in fatuity or in blighted embryos, or the poison must be treated to this antidote.

Just so long as man and woman commingle, the carnival of illicit love will be celebrated, no matter how deep the asp may sting. The regulation of prostitution is proper, because it is humane. It is the creation of a need, the best redress against the most appalling scourge; it is to protect society against its worst assailant. It aims to palliate what must be endured. Its errand is for the good of man. It arrogates a devotion to the well-being of the race, as fit for sanction and hope as any field of Christian disinterestedness. Too long have the cries of the leper been projected against a cold pity. The shattered frames and putrid shells of a once fair and respected manhood have not educated our sympathies to any special combat with the disease. The silly polemics of saintly rhapsodists and the wild oracles of our Cassandras in religious things have frightened into a hallowed horror many a sensible purpose to limit the diffusion of this pest. Meanwhile the plague-spot has strengthened its borders, and the pit alone has stilled the wail that comes from the heritage of crime. Few have there been who dare to contradict the moral uses of disease. *Tutus cavendo* is the finding of the masses. Those who play with fire must expect to be burned, and it would be fatal to a lucid realization of the *rôle* that suffering must play in our moral economy, to make the wages of vice less than death. Pain is sin's vindictiveness. The day for these platitudes in morals is fortunately nearing its close.

Already there is creeping into legislation a confidence in this theory of controlling vice by qualifying its range, when it does not admit of absolute suppression. The license of dram-shops is really a concession to the business. For years a combat with brokers in gin has been fed by the fiercest execrations in

the pulpit, the speedy discipline of law, and the most delicately constructed prohibition acts, and yet the quantity of liquor consumed and the number who drink has increased frightfully beyond computation. The uselessness of fighting this propensity and habit has at last been felt, and now the license of this traffic is hailed as the most sensible method of dealing with it. Hundreds of our citizens, who are at heart opposed to encouraging the sale of alcohol, are fortunately shrewd enough to see the impracticability of a wholesale rout of this beer and whiskey crowd. Men will always drink, they argue and with cleverness, and it is a show of wisdom for us to tax them for their depraved tastes, and, if possible, by a heavy assessment to shut up the cheap grog houses where are the greater temptations to the adulteration of liquor. Alcohol in every form deals death, but the purer it is the less rapid its power to kill.

An earnest examination of the workings of registration will always make a case for it, if the inquiry is unbiassed. The success of the movement hinges entirely on the support society will allow it. Prostitution is not so past correcting as our fathers in Israel have indoctrinated into us. The infirmities of a generation need not be repeated in its successor, nor the fair form and feature of the son pencil out the rottenness within his inheritance, if that true religion can work in us that makes vice part with half its evil, that directs us to a good to be realized this side of the hereafter, that is not satisfied until physical vigor and cleanliness are in symmetry with our godliness in conduct—a religion whose momenta are measured solely by our efforts to lessen misery, to restore energy, to devitalize evil, in short to live for others. That desire that turns to the individual or society to make it some better, to exhaust some of its bitterness of existence, to ward off the frenzy of passion from physical growth and perfection, that desire that looks to the happiness of the races of the far off future, that they may not curse the law that called them into activity; that desire to live forever here in the deeds of charity remembered of us, is among the canons of a healthy religion. To make the prostitute less obnoxious to the community, less hideous to herself,

less execrable to her issue, is as much a part of religious ethics as to provide against the adulteration of food and other articles of consumption is born of a necessity to our trade relations.

A love for humanity is among the excuses of sound religion, and he who owes a fealty to such a sentiment must engage in what is for the good of all. The social evil did not arise independently of law. Its evolution is as legitimate as are the workings of sin in its other guises. To improve mankind in physical culture and to insure him against the havoc of disease is a part of the intention of any religion that is beneficent and not allied to myth, and it is the burden of this proposed legislation with the fallen and degraded to restore to soundness and to kill the germs which will mature at the expense of those yet unborn. Not until licentiousness is made improbable, and the venereal venom cheated of its death-dealing potency, not until the gambols of passion and wenching can be remembered only as relics of by-gone immorality, can religion be profaned by this innovation on her sacred domain.

To win over to virtue is a task not always auspicious, but to unsettle the method in vice, to determine a boundary to the evil-doer when one can't convert him, to forbid disease to draft the innocent, is a venture never unforbidding. If then by registration and medical inspection lust may be made to do homage to law, the bawdy-house filtered of its corruption, and rape, seduction and infanticide diminished, the reformer may reason that the postulates of morality have been as well fulfilled as can be, until carnal yearnings die. If, *per contra*, we must tarry at Jericho until our beards are grown, if the problem of man's restoration to purity and his victory with vice must be in perpetual solution until the voice of prophecy is lost in awful goodness, if it be judged cowardly to stipulate with sin, impious to commute the death-sentence passed on evil doing, mutinous to lop disease of its blossoms and defeat its vegetation, of this we may have fear, that long before the warfare with error is stilled and the advent of universal virtue consummated, this variety of dissipation will have thinned out the race or laid them low in imbecility.

Renal Cirrhosis.

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(*Read before the New Orleans Medical and Surgical Association.*)

On a former occasion I read a paper on albuminuria, and confessed to have derived my facts and deductions principally from the writings of Bartels. In this paper on renal cirrhosis, I have the same confession to make.

We will first take a cursory glance at the gross and microscopic pathological anatomy of the kidneys in this disease: both organs are affected, though sometimes one more than the other; they are so much reduced in size, as to resemble those of a child. The cortical substance is more atrophied than the medullary, the capsule is thick, tough and closely adherent, the surface is pretty uniformly uneven, presenting granules or nodules, the size of millet seed. These nodules contain numerous cysts filled with gelantinous substance. The kidneys are tough and resistant on section, and of a reddish brown or grayish white color, according to the amount of blood present: they never present that marked yellow coloration due to fatty degeneration, always observed in those rare cases of secondary atrophy, after chronic diffuse nephritis. Microscopic examination shows that the atrophy is due to an extensive wasting of the glandular tissue, the renal tubules with their epithelia and blood vessels; great numbers of wasted glomeruli are seen, as little dark round bodies, in which are still an outline of their capillary coils. These bodies lie imbedded in connective tissue, *unconnected* with the renal tubules; here and there, and sometimes in considerable groups, are seen normal tubules with healthy epithelia, and normal capsules with healthy malpigian tufts. The little cysts before mentioned, as found in the nodules, appear to be developed from dilated and strangulated tubules, whose contents have undergone colloid metamorphosis; some are developed from Bowman's capsules, and contain the remnants of the capillary coils. Sometimes these little cysts occur in a row as beads upon a string, as though a tubule had been strangulated at numerous points of its course. The straight tubules are mostly normal in appearance. The disease always

commences on the surface of the organ, mostly at the hilus, and advances towards the pyramids; it is always found most developed on the surface. No oil globules or degenerated lymphoid cells, evidencing a prior inflammation, are found, except in those rare cases where genuine renal atrophy has been complicated with nephritis, or those almost equally rare cases of secondary atrophy following chronic diffuse nephritis.

The following pathological conditions in other organs and bearing a causal relation to the kidney disease, are mentioned in the order of their frequency: hypertrophy of the left ventricle of the heart, peculiar alterations of the retina, hyperostosis of the cranium, thickening of the dura-mater, apoplectic effusions into the brain, and lastly dropsy and marasmus.

In the majority of cases this disease proves fatal from apoplexy, uræmia, or some acute inflammatory effusion. The general nutrition is mostly good at time of death, but should patient survive long enough, as they exceptionally do, there will occur dropsy and marasmus, as in chronic nephritis. As to the exact nature and sequence of the pathological changes in this disease, writers on the subject differ. Many, as Traube and A. Beer, believe in the following consecution of events:—1st, interstitial nephritis; 2d, inflammatory hyperplasia of connective tissue; 3d, shrinkage of the organs in consequence of destruction of gland tissue, and diminished blood supply, both due to the pressure of the increased cellular tissue. Johnson taught that the shrinkage of the organs was due to a destruction of gland tissue in consequence of a desquamative nephritis, and that the increase of connective tissue was only relative; Grainger Stewart and Liebermeister, that their first occurs a positive and non-inflammatory hyperplasia of connective tissue and then a destruction of gland tissue, in consequence of pressure on the blood-vessels and tubules. Gull and Sutton, whose teaching is accepted by Bartels, holds with Stewart and Liebermeister, that this disease commences with a non-inflammatory hyperplasia of connective tissue, but assert that this hyperplasia begins with a thickening of the tunica adventitia of the smaller arteries and capillaries, and spreads thence to the intertubular tissue; that this thicken-

ing narrows the calibre of the blood-vessels and finally obliterates them; that the destruction of the tubules is due to two causes, viz: pressure of the increased cellular tissue, and diminished blood supply from the obliteration of capillaries and small arteries; that this process commences in the most superficial layer of the cortex and slowly, and unequally in different parts of the organs, advances towards the pyramids; that neither all the arteries, or all branches of the same artery, are affected; that some of the tubules are simply constricted here and there, and thus originate those cysts before mentioned; that some parts of the organs are found perfectly healthy and others utterly destroyed as to their gland tissue, and lastly that no oil globules or degenarated lymphoid cells are found in the organs.

Bartels, after studying this disease clinically and anatomically, and after reviewing the investigations and deductions of other authors, concludes with the positive opinion that this disease, genuine renal contraction, renal cirrhosis, renal sclerosis, the so-called third stage of Bright's disease, is the result of a primary proliferation of the renal connective tissue and commences and pursues its course independently of inflammation; that the process leads steadily to a wasting of the glandular elements and is preceded by no inflammatory swelling; that said wasting commences in scattered spots on the surface and gradually extends towards the interior. He was never able to trace, in the dead body, a transition from inflammatory swelling to true cirrhosis. Though he never met with a kidney, one part of which was inflamed and the balance normal, he commonly met with kidneys, large portions of which were cirrhosed and small portions perfectly normal. He admits, however, that in rare cases, an acute inflammatory process is engrafted on the cirrhotic affection, and that an acute inflammatory attack might give a start to the contracting process. The secondary contraction of the kidneys, which does sometimes occur as a rare sequel of chronic diffuse nephritis, differs from the genuine disease in both its gross and microscopic anatomy; the organs very seldom become so small as the normal size, and are never reduced to the

small size, which is the rule in the genuine disease; the nodosities on the surface are larger and less uniform and separated by broader bands of connective tissue. These nodes, consisting of the remains of the glandular tissue, are of an intensely yellow color and never of a dark brown or grayish white color, as is the case in the genuine disease, and the little cysts are much fewer in number; more renal tubules are preserved in the cortical substance, but their epithelia are in a state of fatty degeneration. In this secondary disease there are no changes in the arteries, but oil globules, the remains of degenerated lymphoid cells, are found abundantly in the cellular tissue. The alterations of vision which occur in the contracted kidneys, as well as in other forms of renal disease, may result from uræmia, embolism or inflammatory changes in the retina.

Owing to the peculiar nature of this disease, it is never recognized in its incipiency or even at an early stage of its progress. Patients often die of apoplexy or repeated epileptic convulsions without ever having had a symptom of serious ailment, or some acute inflammatory or febrile disturbance may be renderod fatal by the coexistence of this renal malady, which is only discovered on post-mortem examination; but in the majority of instances striking symptoms indicative of the disease precede its fatal termination, and occasionally continue intermittently for many years. The following are the most prominent earlier symptoms—polyuria, occuring mostly at night, thirst, vertigo, palpitation of the heart attended with uneasy sensations of oppression and want of breath, by hypertrophy of left ventricle of the heart, unrest at night, sleep being disturbed by dreams, and disorders of vision. Hypertrophy of left ventricle is evidenced by increase of cardiac dullness upwards and to the left, apex normal or removed to the left, pulse tense and bounding, and accentuated diastolic sound heard to the right of sternum, just above attachment of third costal cartilage. Hypertrophy of left venricle is almost a constant symptom and is only absent in cases of exceptionally bad nutrition from the beginning of the disease. Next in order of symptoms occur neuralgia, particularly hemicrania

and nervous asthma, then dyspepsia in consequence of which there follows anæmia, emaciation and loss of strength. Temper becomes morose and irritable, skin dry and of a dirty faded color, as most patients die before the extreme stage of the disease is reached. Dropsy occurs only in about one-half of the cases and is generally limited to the ankles, exceptionally occurring in the face, general cellular tissue or serous cavities; but if in the earliest stages of the disease the circulation becomes enfeebled from the depressing effects of fever, general bad nutrition or valvular disease of the heart, dropsy may occur temporarily, disappearing with an improvement of nutrition and the circulation. Sometimes oedema of the lungs is the only dropsical symptons, and is attended with the expectoration of large quantities of thin frothy sputa.

Albuminuria, though one of the characteristic symptoms of this disease, is by no means a constant one. The quantity of albumen found in the urine is always insignificant in comparison with that found in inflammatory affections of these organs, and is often so small as to elude detection, unless frequent searches are made for it, and made under varying circumstances; the day urine may contain it, whilst the night urine is free from it. The general nutrition being good, there will occur albumen; but nutrition becoming bad, the albumen will disappear, the circumstance of arterial tension or blood pressure exerting a controlling influence over the presence of albumen. The urine is generally large in quantity, clear of acid reaction, deposits little sediment and is of low specific gravity—1004 to 1012, but under circumstances of vascular depression the quantity of urine may diminish and its specific gravity increase. The percentage of solids, urea, uric acid, chlorides and phosphates is small, corresponding to the low specific gravity, but the total amount is nearly normal until an advanced stage of the disease; the amount of urea is particularly small when the general nutrition is small. In the urinary sediment are found a few scattered casts, but often many specimens of urine have to be examined before any are found. They are generally narrow, exceptionally broad and of the hyaline kind. Dark granular casts are scarcely found; Bartels never found

any of the waxy kind. A few healthy ephithelial cells are found adhering to the casts, but cells undergoing fatty degeneration are very seldom found. Examinations of the blood in the latter stages of the disease have disclosed the presence of urea and sometimes in considerable quantity, but judging from the excellent state of nutrition and preservation of strength enjoyed by these patients for many years, it is more than probable that the blood retains its purity, until from failure of urinary functions it is poisoned from the retention or absorption of urinary constituents.

When patients die in the extreme stage of renal cirrhosis, they sink under symptoms of chronic uræmia, viz: grave dyspeptic troubles, such as chronic vomiting and diarrhœa, intense itching of the skin, ulcerations of the bowels or hemorrhages from the nose, stomach or bowels, or into the subcutaneous cellular tissue. Emanations from the breath or skin in these cases have a urinous smell, and the skin and hair of the beard are sometimes covered with crystals of urea. The fatal coma is often introduced by fits of maniacal delirium or epileptiform convulsions.

The most important symptom in this disease deserving analysis, is hypertrophy of the left ventricle of the heart. Bright supposed it due to the irritation of an impure circulating fluid, but failed to prove that the blood was really impure before the hypertrophy was far advanced, nor did he show why the right ventricle, being subjected to the same supposed irritation, was not similarly hypertrophied, nor why, in other kidney affections where the blood was notoriously impure, no such hypertrophy occurred.

Gull and Sutton hold, that this hypertrophy is not a result of the renal contraction, but a co-result of the same cause, viz: fibrous thickening of the coats of the vessels, which they claim obtains irregularly throughout all or most of the arterial system; but as some branches of the renal artery are effected and others not, so in other parts of the body this vascular alteration may exist more or less, or not at all. Thus they account for those rare cases of renal cirrhosis without hypertrophy of the left ventricle.

Bartels does not accept this very plausible view, for the reason that he considers the previous hypertrophy of the greater part of the arterial system unproven. He believes with Traube, that the hypertrophy of the left ventricle is due to increased and sustained tension in the arterial system, which tension results from the obliteration of a large number of the branches of the renal artery with their malpighian tufts, thus reducing the channel through which the blood from the renal artery must drain away. He regards hypertrophy of the left ventricle as a consequence of renal contraction, as hypertrophy of the right ventricle is a consequence of mitral deficiency or pulmonary emphysema.

To explain away those rare cases of renal cirrhosis, where no hypertrophy of the left ventricle occurs, as well as why, as a rule, we have no such hypertrhphy in parenchymatous nephritis, he reminds us that, in those states of general bad nutrition, which may accidently occur early in the progress of renal cirrhosis, and which do occur, as the rule, in parenchymatous inflammation of the kidneys, no arterial tension can occur, owing to the watery condition of the blood. In the commencement of parenchymatous nephritis there is often a very high degree of arterial tension, but owing to the peculiar nature of the disease, this tension is not sustained. The functioning power of the kidneys is so diminished, both as to the excretion of water and urinary solids, as to quickly so alter the blood by the retention of its water and urinary constituents, that a general failure of nutrition and dropsy sets in, and arterial tension is reduced to or below normal. As hypertrophy of the left ventricle fails to occur under such circumstances, so hypertrophy of the right ventricle fails, as the rule, to occur in pulmonary consumption, though there may be an obliteration of a greater vascular area than ever occurs in pulmonary emphysema. Thus the volume and character of the blood are important factors to be considered, in estimating the relation subsisting between kidney disease and hypertrophy of left ventricle of the heart.

To explain away those recorded cases, where one kidney has been totally destroyed without an ensuing cardiac hypertrophy,

he suggests that such wasting of a kidney being accomplished under circumstances of exhausting disease, before the general nutrition is so restored that hypertrophy might occur, the healthy organ may have undergone such compensatory enlargement as to vastly increase its vascular area; but even though this might not be the case, he doubts whether the total destruction of one organ equals the vascular area obliterated in the contraction of both organs, so, though one kidney be successfully extirpated, the vascular area of the remaining one may more than equal that of two contracted kidneys.

This hypertrophy of the left ventricle is nature's efficient compensation for the loss of renal secretion tissue; the exalted blood pressure enables the remaining malpighian tufts to excrete even larger quantities of water than healthy kindeys would excrete under normal arterial tension; the epithelia of the remaining tubules, by reason of their healthy condition and the rapid flow of blood due to arterial tension, are enabled to perform their function, secretion of urinary solids, most efficiently, especially as they are being continually washed or rinsed out by a rapid flow of water from Bowman's capsules. So long as the hypertrophied ventricle is thus able to compensate the loss of renal secreting tissue, we have no retention of water and urinary constituents, and therefore no dropsy and no uræmia; but if the destruction of renal tissue passes certain limits, or if from mal-nutrition or any other debilitating cause, the heart loses its energy, we will have a failure of renal function and consequent dropsy or uræmia, or both, according as the kidneys fail in the one or other function, excretion of water or secretion of urinary solids, or in both. The failure of the one function does not necessarily imply the immediate failure of the other, for from some special circumstances there may be such a production of urinary constituents in the system that the kidneys are unable to dispose of them, though they are able to filter a sufficiency of water from the blood. We may thus have even a severe attack of uræmia without dropsy; such attacks are often relieved and patient may live, under favorable circumstances for years, in the enjoyment of ordinary good health.

The albuminuria in this disease is entirely due to abnormal blood pressure, and in no way due directly to the renal changes. Bartels relates several cases wherein albumen could be made to appear or disappear at pleasure If patient was well fed and made to take plenty of exercise, he would have albuminuria; if put on light and insufficient diet and kept in bed, the albumen would disappear from his urine. The loss of albumen, however, is so insignificant as not to affect general nutrition, so long as the digestive functions continue good.

Though the before mentioned cardiac hypertrophy is so conservative, it is often attended with disadvantages and dangers. To it we ascribe the palpitations, headache, vertigo and hemorrhages, from the nose and into the cerebral substance; those homorrhages occurring in the latter stages of the disease from the stomach and bowels, or into the cellular tissue, are attributed to vascular degeneration from mal-nutrition. Gull & Sutton attribute the thickening of the skull and meninges to a process of proliferation, analagous to the renal disease. Neither Bartels, nor any of the authors whom he quotes, explain the retinitis or embolism which occurs in this disease.

Renal cirrhosis is most common among males and most frequent in middle life; occurs in all classes of society with like frequency: occurs to the dram-drinker, the tea-drinker, the beer-drinker, and to the man of abstemious habits alike. Lead poisoning is thought to predispose to the disease; Dickenson records that, out of forty-two cases of chronic lead poisoning, he saw twenty-six die of renal contraction. In England so many gouty subjects die of this disease, that it is commonly styled the Gouty Kidney. It is probable that the long continued presence in the blood of lead, uric acid or the salts of the latter, may induce, or at least predispose to the disease. Bartels states that several of his cases had had inveterate ghonorrhœa, with extension of ghonorrhœal catarrh to the bladder. On the whole, however, we consider that the cause of renal contraction is still veiled in obscurity.

The prospect of treatment in this disease is a cheerless one; the disease is always far advanced before it comes under the observation of the physician. Even though we could stop the

pathloogical process where we find it, nature's compensatory measures are not permanent, and even though they were, they are in themselves fraught with continual danger. Cirrhosis of the liver is in every respect analagous to this disease. Its pathalogical process is the same, it is discovered by the physician at a similar stage of its progress, and its treatment is alike hopeless.

In the treatment of renal cirrhosis, we only hope to prolong the life of the patient. Iodide of potassium, from its favorable effects in analagous processes of proliferation of tissue, has been suggested as the remedy for the fundamental pathological process, but we are mostly guided in our treatment by a consideration of the dangers from excessive arterial tension on the one hand and anæmia and debility on the other. When signs of extreme arterial tension show themselves, such as cardiac palpitation, oppression of breathing, giddiness and roaring in the ears, complete rest and fasting should be enjoined and digitalis and small does of morphia administered; should these symptoms be extremely severe, venesection should be performed.

Anæmia and loss of strength should be treated according as they result from hard labor, insufficient food and loss of albumen, or from that worst of symptoms, dyspepsia due to uræmia. In the former case rest, proper nourishment and the administration of tonics, such as iodide of iron, are indicated; in the latter case we are mostly confined to a judicious selection of food; pepsin and hydrochloric acid will generally prove useless. The obstinate vomiting in such cases is best treated with iodine or creasote, administered in small doses, at the instant of the feeling of nausea. Cardiac debility indicates preparations of iron and stimulants, particularly good red wine. Dropsy is seldom so great as to require special measures for its relief. Those acute premature attacks of uræmia should be treated energetically, but Bartels does not think that venesection, in this disease, is attended with the good results so often obtained in the eclampsia of pregnancy, and suggests in explanation, that it may be that the fluids resorbed from the tissues, after and in consequence of the venesection in the latter dropsical case, are not so saturated with the products of retrograde

metamorphosis of tissues as in the former non-dropsical case. He suggests further the substitution of healthy for diseased blood by transfusion would be preferable, if practicable. Chloral hydrate is the best sedative in these attacks, and in the intervals between the paroxysms large quantities of water should be given by the mouth or rectum, in order to thoroughly wash and rinse out the kidneys. The treatment of chronic uræmia is useless.

Before closing this paper, I would like to express my high appreciation of the last paper read before this Association, and would again direct attention to the preliminary remarks in that paper with reference to the extreme importance of a correct diagnosis. Unless a knowledge of symptoms and their correlation directs us to a correct understanding of the underlying pathology, our treatment will necessarily be empirical and irrational. Such practice may result disastrously to our patients and entail distrust to our patrons and at least mortification to ourselves. I know of no disease so likely to elude recognition by the physician as that the subject of this paper. If called to a case of epileptiform convulsions with the co-existence of dropsy, our attention is at once directed to the kidneys, but when no dropsy exists, which is so very often the case in this disease as to almost be the rule, I fear the true cause of the convulsions or apoplexy is often not recognized. Without doubt patients are often treated for long periods of time for vertigo, palpitations, asthma, headaches and other obscure nervous symptoms, before an underlying renal cirrhosis is discovered; and how mortifying to the physician after exhausting the whole vocabulary of dyspeptic remedies, vegetable bitters, mineral acids, pepsine, ipecac, bismuth, &c., to find his patient become dropsical and uræmic, to be forewarned is to be forearmed; knowledge of the disease enables us to recognize it, and often saves our patient much useless if not injurious medication, and saves the physician much doubting anxiety and perhaps mortification. Though I thus emphasize the importance of correct diagnosis, far be it from me to disparage therapeutics, for all possible knowledge of anatomy, physiology, pathology, and symptomatology avails nothing, unless such knowledge directs us to conservative treatment.

Current Medical Literature.

ON MORPHINISM.

At a meeting of the Medical Society in Berlin, Dr. E. Levinstein presented some remarks on the above mentioned disease, based upon his late experience.

As to the question whether it be preferable to institute a sudden or gradual breaking of the habit of using morphine, the author has several times before pronounced himself in favor of the abrupt method and he prefers it still as a rule, inasmuch as it often happens that serious symptoms appear when the gradual breaking of the habit is finally accomplished; in employing the abrupt method these symptoms usually cease in 4–5 days. The abrupt method is, however, very potent, and delicate persons, especially women, often have difficulty in enduring it; medical attendance must be on hand continually for the sake of assistance in case of necessity. In patients suffering from chronic, painful and incurable diseases, the abrupt method is not to be carried through. In such patients where death is evidently near on hand a breaking of the habit is entirely out of question, but in other cases, where it is impossible to calculate life's duration, it is undoubtedly in the patient's interest to get rid of his habit, as morphine finally ceases to give relief even when used in steadily increased dose. The nervous system is, so to speak, saturated and cannot be acted upon in the same manner as before; the toxical effect of morphine only remains, while the soothing, alleviating effect does not appear any longer. But when the constitution, through a breaking of the habit, has been purged of morphine, the former normal condition returns and quite a small quantity of morphine has again a narcotic action. In patients suffering from incurable, painful diseases we ought consequently to institute a breaking of the habit in order to enable them to be benefitted by the use of a remedy, which, when used in the proper way, may give ease and soothe the pain, but when abused, only can increase the sufferings in adding a fresh one.

In such patients Dr. L. has employed a modified method, which mainly depends upon an abrupt breaking of the habit and he has succeeded with it in patients suffering from phthisis, emphysema, heart disease, etc.

The modified method is described in the following way: in order to ascertain the quantity of morphine the patients are consuming daily, they are, previous to the actual treatment, isolated and put under observation, and for 2 or 3 days they get the dose of morphine they have indicated themselves; after that all supply of morphine is stopped suddenly. According to the author's experience it is only exceptionally and only

when the patient's nutrition has not been properly attended to, that a serious collapse occurs during the first 24 hours after the last hypodermatic injection. But after the lapse of this period the critical symptoms appear, which may develop into a dangerous collapse: as soon as this is threatening to occur (tardy pulse, slow and irregular respiration, violent diarrhœa and vomiting), we have to do something to prevent it; if the patient formerly has been using very large doses (45 to 60 grains during 24 hours), 1-30 of this amount will be sufficient to produce if not a very pleasant condition, at any rate a tolerable one and make the worst symptoms disappear; if the daily dose has been 7½ to 15 grains, 1-15 of this amount will prove sufficient, and if not more than 7½ grains a day have been used, 1-10 of the usual dose will do.

It is advisable to make the patient commence the cure at night time; by this arrangement the discomfort is light during the first night; during the following day the symptoms caused by the abstinance, increase and reach a considerable height towards night; but at this point a moderate hypodermatic injection is administered to the patient and makes him pass an endurable night; the next night a somewhat diminished injection is given (1-40, 1-20, 1-15 of the usual dose), and so-forth the 3d, 4th, 5th day until the dose has been reduced to 1-6-½ grain, these doses as a matter of course ought not to be imitated unconditionally; in serious cases the physician must be guided by circumstances; in few instances, however, will he find it necessary to allow larger doses.

The author has used this modified method also in delicate persons and only in few cases did he have to give any injection after the two first nights.

Through the modified method we have learned, that already in a short time after having made the patient stop using morphine, a small dose of it is sufficient to prevent the breaking out of violent symptoms and we possess in it a remedy to facilitate considerably the troubles, which are started by the entire and abrupt discontinuance of using morphine; Dr. L. intends, however, yet to use the latter method in robust individuals, whilst the modified method is indicated in women, delicate persons and in patients, where the consumption of morphine has to be reduced to a minimum.

Taking in consideration the advantages attached to the modified rapid breaking of the habit, nobody will probably adhere to the gradual discontinuance; it is, however, advisable to watch the patient as closely as in using the abrupt method, although the task has been rendered much easier to the patient as well as to the physician and the nurse.

When a person has been cured of abuse of morphine and has recuperated his former health in body and mind, he is generally exposed to suffer a relapse, and we must prepare to protect him against this occurrence.

Is it, after all, possible to prevent the relapses? Under certain conditions, yes; but besides possessing considerable power of will, it is necessary that the individual should not be too far advanced in age, that his pecuniary position should allow him to make some sacrifice and that he should not have used very large doses of morphine for a great number of years.

When a patient successfully has accomplished his cure and is on the point of being dismissed, he ought to be told, that although cured of morphinism, of morphine-poisoning, he is not yet clear of all danger, and that during the first year he will be subject to attacks during which it will be difficult for him to resist the desire for morphine; it will consequently be in his own interest willingly to submit himself to a careful control, in order to be protected against a relapse; if he be unmarried, care should be taken that he does not live alone but together with a friend. Druggists, as a rule, relapse immediately, and there is nothing to be done for them if they cannot sacrifice their position; the same is the case with physicians, if they do not abstain from administering injections of morphine personally to their patients.

This sounds very harsh and seems to violate the dignity of man; is it possible, that men, occupying so high an intellectual position, should not possess more power of will and control over themselves? And yet experience shows it to be so. In many cases the physician could administer the remedy (morphine) to his patients in some other shape in place of the hypodermatic injection, and where the injection seems absolutely necessary, he will have to employ a remplaçant whom he may instruct and superintend; still better would it, however, be to turn the patient over to a confrère. Hypodermatic injections of morphine administered by a physician disposed to morphinism rouse in him the desire for morphine, and from thought to action there is but a short distance, when the desire for this drug is involved.

The author points out that a certain (fortunately limited) number of morphiophagi can not do without morphine forever; this was the case in certain individuals who had consumed 15 to 30 grains of morphia a day for a number of (10 to 15) years; they did not suffer from any actual disease of body or mind, but they did not feel satisfied being without the use of morphine; with a healthy appearance they had recuperated their appetite and sleep, and yet they did not feel at ease; 5 to 6 months later they lost their appetite, became sleepless, lost flesh and wasted away. No actual disease was to be discovered and in the beginning the author thought that they had relapsed and were using morphine clandestinely, but by close observation he satisfied himself that this was not so. On the other hand it was found that these very rarely occurring cases are cured just by morphine, which had become an absolute necessity to the constitution by being used for years; it would

be acting on a wrong principle out of dogmatism to persevere in refusing morphine to this class of patients; before morphine is allowed to them, the symptoms should, however, be carefully investigated. As a rule there is nothing to be feared from total abstinance of morphine during the first 5 to 6 months in old individuals, and during the first year in middle aged persons; if then a decline sets in, we ought to interfere and allow a little morphine; at times a vital indication may demand it; 1-12 to 1-6 gr. given 2 or 3 times a day is, however, sufficient, and it is not even necessary to increase the dose to procure sleep, appetite and comfort.

The author has had under treatment 110 patients suffering from morphinism: 82 of them were men, 28 women. The preponderance of the men is probably caused by their social position.

Amongst the 82 men and 28 women, 32 were physicians, 8 wives of physicians, 1 the son of a physician, 1 a medical student, 2 charitable sisters, 2 male nurses, 1 midwife, 6 druggists, 1 the wife of a druggist—54 consequently belonging to the medical profession and its appendices—army officers are represented by 18 men and 1 woman, of the balance 11 were merchants, 5 wives of merchants, 4 wives of civil officers, 2 single ladies, 3 male and 2 female rentiers, 3 landed proprietors, 4 lawyers, 1 male and 2 female teachers. The youngest was 21 years old, the oldest 65 years.

20 men and 6 women had acquired the habit of using subcutaneous injections of morphine through acute diseases, 46 men and 17 women from chronic diseases complicated with pain and discomfort, 1 man had used the remedy as an antaphrodisiacum, 15 men and 5 women had been induced to use morphine partially in order to put themselves in a pleasant mood, partially in order to forget domestic troubles. Out of the 110 patients 12 men took to drinking while using morphine. Of the 82 men 61 relapsed, of the 28 women 10 did so. Of the 32 physicians 28 relapsed.

In looking for the cause of the comparatively large number of physicians addicted to morphine and especially exposed to a relapse, we come to the conclusion that their profession is the cause of it; it is not the desire of enjoyment that induces them to use morphine. The author has treated most respectable men for this disease, men who were enthusiasts in their profession, of very unselfish disposition, and who just disregarded themselves entirely in the fulfillment of this duty towards their patients. Often it happens that a physician, through a painful disease, having been accustomed to the use of injections of morphine, has to resume his practice a little too early; and as he can by no means appear weak and faint before his patients and yet has to stand exertions that demand health in body and mind, he seizes the remedy that already has made him get over many painful hours.

The relapses are in several cases depending on the effect caused by an immoderate use of morphine for a long time. Months after the patient has been deprived of morphine, when he seems to be entirely restored to health, fear and restlessness appear at a sudden, repeating itself in some days, and these attacks are complicated with a strong desire of morphine; these attacks may occur isolated, but sometimes they occur for days and weeks so violently that the patient succumbs to his desire if he be not possessing an extraordinary firmness, or if the necessary precautions have not been adopted.

Finally, the physicians are often to be blamed; when a patient has been successfully treated for morphinism and later happens to be suffering, or simulates to be suffering, from some painful trouble (tooth-ache, sick head-ache) the attending physician administers sometimes to such a patient an injection of morphine, which in many cases causes a relapse to their former passion (amongst 8 patients which the author had got under treatment a second time, the relapse had originated in this manner in 5).

Morphinism is of very little importance in criminal law, as it is hardly possible that a crime committed by a morphiophage can ever be excused by lack of responsibility.* In civil law morphinism may be of some importance and sooner or later the life insurance companies will find it necessary to take a certain position towards morphinism as well as towards alcoholism. There is no doubt that morphiophagi as well as alcoholists shorten their lives and in case of life insurance inflict damage on the company. Morphinism can, however, not be looked upon in the same light as alcoholism, as noboby turns alcoholist from therapeutical causes, while the morphine consumer usually has a therapeutical object, intending to soothe pain, sleeplessness or fright: even when abused it often has to be considered as a medicament; the life insurance companies can hardly help taking this in consideration: only those individuals, who, without suffering from any disturbance of body or mind, make an abuse of morphine may be looked upon in the same way as drunkards.

The insurance companies, as is well known, have by-laws, stating that the proprietor of a policy can not claim the insurance money, when the insured person (whether sane or insane) caused his death by suicide; it is consequently entirely indifferent whether the party were imputable or not. In the latter years the author has had occasion to get acquainted with the death of 4 physicians who were morphiophagi; 3 of them had used morphine in order to alleviate morbid conditions; they gradually became accustomed to it and had to increase the dose to obtain effect, until they finally reached a dose which

*Evidently the author is not familiar with the law in general and the criminal law in particular as practised in Louisiana and Texas, where a much more insignificant circumstance than morphinism is often sufficient to acquit a murderer.—(*Rep.*)

proved fatal: they went to bed apparently in their ordinary condition and presented the next morning symptoms of acute morphine poisoning, which in a few hours caused death in spite of all treatment: they had killed themselves, certainly unintentionally, but this according to the above is of no consequence. As to the fourth confrère something similar happened to him: he tried in his home to submit himself to treatment; but this experiment failed as usually is the case, and he got hold of ¼ of his usual dose for 24 hours; a dose which 8 days before hardly would have had any narcotic effect, but which now caused death. The modified method has shown us that when the patient has been deprived of morphine for 24 hours, 1-15 of the usual dose is sufficient to check and even to overcome the violent symptoms following abstinence. Through abstinence the system is in a very short time purged of morphine and its narcotic effect can display itself as before when given in a small dose: under such circumstances death may occur from a dose which before had been comparatively innocuous. Whether these 4 cases ought simply to be dealt with according to the insurance companies' rule on suicide is a question of law. At any rate the companies will find themselves compelled to take a decision in regard to morphinism when issuing new policies. In controversial questions the heirs of the insured parties will have to go to the courts, who will have to procure the opinion of physicians conversant with the subject and decide the individual case accordingly.—(*Berliner Klin. Wochenschr.*, 1880.—*Ugeskr. f. Læger.*

(Dr. E. Levinstein has on several former occasions given accounts of his experience with morphinism. He points out that the disease is of modern origin dating from the introduction of the hypodermatic syringe into general practice. The originators of the disease are those physicians, who, treating more or less painful and tedious diseases, have left it to the patients to administer on themselves the injection.

Morphinism presents similar symptoms as alcoholism (delirium, fright, trembling, hallucinations and diminished resistance in case of an accidentally occurring disease): they differ by the fatty degenerations missing in morphinism, that mania does not occur and finally that the victims of morphinism nearly exclusively belong to the higher classes in society.

For those persons who quite often inject morphine on themselves, this remedy finally becomes indispensable, in the same way as liquor to the habitual drunkard: it makes them get over their low spirits, forget their domestic unhappiness, their troubles in business and so on: they obtain, however, merely temporary relief and have to have recourse to their poisonous remedy to be alleviated in their melancholy condition.

Characteristic for morphinism it is that sugar is often found in the urine of such patients; it disappears, however, usually in

a few days, when the patient ceases to use morphine. Sometimes, also, albumen is found in the urine, but it takes months to make that disappear.

As to the prognosis L. remarks that out of quite a large number of cases, he has hardly seen 25 per cent. cured; most of them relapsed; 2 cases turned out fatal from marasmus, 2 patients committed suicide: in these 4 cases the patients did not want to submit themselves to a regular treatment. 5 patients became addicted to drinking, amongst them a physician's wife who had learned from a pharmacology that alcohol was the antidode of morphine and a remedy to break one of the habit of using morphine. She followed the advice and took to the opposite extreme.

The treatment consists chiefly in withdrawing the morphine from the patient's use. It is preferable abruptly to stop the supply of morphine, as the system is better able to endure an energetic interference than a slow and tedious action as we often see it to be the case in surgery and obstetrics.

In pronounced cases it is out of question to break the patients of their habit of using morphine, except they be entirely treated like prisoners. They have to be isolated and continually to be under the custody of refined and incorruptible persons. It is difficult to find such assistants, as some of them clandestinely will supply the patient with morphine out of covetousness, and others are unable to resist their entreaties and the sight of their hard suffering. Doors and windows must be scrupulously secured from all communication with the outside world; clothing and utensils belonging to the patient must be carefully searched, it being invariably the case that every patient carries a considerable amount of morphine along with him and one or more syringes, on entering the institution in order to be cured of morphine, whether it be spontaneously or against his will. The physician can in no way rely on such a patient; promises, the most solemn protestations, the patient's word of honor, which is given without the slightest hesitation, all is without any importance, morphine disparaging the character of man, as all passion does. The most refined and otherwise most considerate and intellectual men, do not shun any means or any ruse to deceive the physician in order to get back the morphine they brought along or procure some fresh morphine. If the physician be energetic, if he observes continually his patient, if he has honest assistants, and if he watches them closely also, the worst part of the cure will be passed in 8 days.

Usually, 12 hours after morphine has been withdrawn a collapse occurs; it is for this reason better to let the patient stay in bed and during the first 8 days to be quite liberal in giving stimulating and fiery wines. Even women need during this period to be stimulated by alcoholic drinks in considerable quantity. The collapse may reach such a degree that it

becomes dangerous to life; the danger may be averted by a very small injection of morphine. If the patient does not wail during the first 48 hours of the abstinential period, if he be able to eat his meals in the course of the first days and if he continues to look well, he has, in spite of all denying it, clandestinely taken morphine. The persevering narrowness of the pupil (if this symptom did exist previously) and the absence of diarrhœa will soon corroborate this surmise.

The patient's despair and restlessness is during the first 3 days so violent, that the physician must be thouroughly determined to do his duty, to be able to resist the patient's crying and despair. The patient must be well protected against attempts of committing suicide, as his miserable mental condition may easily induce him to do so. Bathing in warm water is used with advantage to relieve the neuralgies that appear during the abstinence, also to induce sleep at night; if the collapse be not too serious, cold water may be poured over the patient after the bathing. The diarrhœa which, according to L.'s experience, always occurs immediately after the withdrawal of morphine, requires treatment only when it is exhausting him too much; large injections of warm water into the rectum have proven beneficial. Continued vomiting may necessitate feeding the patient by clysmata.

Although alcoholic drinks are indicated, their quantity should be moderated as soon as the patient is able regularly to take his meals, as there exists a close relationship between morphinism and alcoholism. Fresh air, substantial food and preparations of iron will soon assist in recuperating the lost strength. It is furthermore of importance, already in the third week of the treatment, to let the patient have some occupation of his body and especially of his mind, to rouse his self-esteem and make him conscious that his faculty is not destroyed.

Experience shows that the internal use of morphine and the hypodermatic injection, as long as administered by the physician himself, does not lead to morphinism, but that the disease has been developed only when the physicians commenced to leave the administration of the injection to the patients themselves, to mid-wives and to nurses. It is often stated in defense of this bad habit, that the physician may be prevented from giving the injection himself; if so, he must content himself with giving morphine internally; given per anum, or on an empty stomach, morphine is just as much pain-subduing and narcotic as by a subcutaneous injection, although the action may be a little more slow. By giving it internally, the euphory which is just the item that makes morphine fascinating, is missing, and the patient can very well do without that. Our only remedy to check morphinism from being further propagated, is that the physicians in future keep the morphine-syringe under their own control exclusively.)—(*Berliner Klin. Wochenschr.*, 1875.—*Hosp. Tid.*)

OBSTETRIC TREATMENT OF THE PERINÆUM.

Dr. Garrigues, in his article on the *obstetric treatment of the perinæum*, first corrects several common errors in regard to the anatomy of the perinæum and adjacent parts. As to the prevention of laceration in labor, he is positive that much may be accomplished, although now and then the injury is unavoidable. He repeats the warning, and it can not be too often insisted on, that ergot should never be given during labor. Evacuation of the rectum at an early period in labor should always be brought about, no matter what the patient may say as to the free action of the bowels. He considers that the left lateral posture, during the child's passage through the vulvar orifice, aids in preventing injury to the perinæum by relieving it of the child's weight between pains. Emollients are of some service in the exceptional cases in which the parts are not sufficiently lubricated with the natural secretions. Anæsthesia during the passage of the child aids in retarding the expulsion by putting a stop to the action of the abdominal muscles, and thus favors gradual rather than sudden stretching of the tissues. The author regards manual support of the perinæum as of service, if done at the proper time and not overdone. His arguments upon this point are certainly very cogent. Displacement of the perinæum (stripping it back or drawing it forward) he thinks unadvisable in most instances, since such a proceeding would generally have the effect of disturbing the coincidence between the plane of the orifice and that of the shorter diameter of the head. As to retarding the birth by direct pressure upon the presenting part the author seems to favor it in cases of precipitate labor. He very properly deprecates attempts to rectify the position and attitude of the child, remarking that Nature herself performs the best turnings of this kind, and that by enforcing a rectification in one place, we run the risk of doing harm in another place hidden from view. He considers it rational, however, to promote the normal movement of extension by pressing the presenting part toward the symphysis, preferably through the rectum. This manipulation may even be carried to the extent of a sort of enucleation. It is important not to press with so much force as to cause lacerations in the region of the clitoris. As regards manipulation of the shoulders, he would avoid the so-called rectification, and limit interference to the prevention of the simultaneous emergence of the two shoulders, by extracting the anterior one first. With quite justifiable reserve, he praises the operation of episiotomy, or lateral nicking of the orifice. In his experience, however, these relief incisions take a fortnight in healing, and then, instead of agglutination, they heal with a retracted cicatrix, leaving the orifice, as one of his patients remarked, "more open than before." Moreover, they are, contrary to what has been asserted, subjected to the contact of the lochial fluid. Finally, the operation does not with absolute certainty prevent

laceration. After delivery the parts should at once be subjected to ocular inspection. If a rent is found extensive enough to require sutures, it is best to let the anæsthesia pass off for the time being, or wait until after the expulsion of the placenta, and then give the anæsthetic again. But there should be no further postponement—the immediate operation should always be done. Dr. Garrigues believes that many lacerations, while not severe enough to require so formal a proceeding, yet call for immediate adjustment. For such he earnestly recommends the use of *serres fines*, but they should be of the sort that he has, after much pains, succeeded in getting made, and which are to be had of Messrs. G. Tiemann & Co. They are an inch and a quarter long, half an inch of which goes to the legs beyond the crossing, and end in minute claws. They are made of thin brass wire, nickel-plated, and so weak as to just keep the torn surfaces in contact. As a rule, they can be used only once, but their cheapness renders this consideration trivial. The simplicity of the proceeding is its great recommendation, and the pain is so slight that it may be done without saying anything about it to the patient or any one else. From one to three *serres-fines* are used, according to the length of the rent. Beginning at the anal end of the wound, the clamps are put on at right angles to it, their legs being buried to their full length in the tissues. Before applying them, the wound should be cleansed with carbolized water. It is seldom necessary to twist an artery, or cut off loose shreds of tissue. The clamps should be left in place four days. The knees should be bound together with a towel, carbolized vaginal injections used, and a daily aperient given. The remainder of the article is devoted to the suture operation. The entire paper teems with good sense, and the reader will find in it many useful hints in regard to the management of labor.—*New York Medical Journal.*

SUTURES, SILK-WORM GUT.

Dr. George Granville Bantock, M. D., in the *British Medical Journal*, June 12, 1880, contributes an article analyzing his second and third series of twenty-five cases of ovariotomy. The following extract gives his opinion of the merits of the silk-worm gut sutures.

I first employed the silk-worm gut in my twenty-seventh case, and then only for the sutures, on each side of the drainage-tube. The remaining sutures were of silk, and, and on the fifth day, there was a small red circle around each of their openings, while the gut punctures presented no trace of irritation. In my next case, I used five silk-worm gut sutures and two silk, the latter at the top of the wound. A small abscess formed in the track of these, and they were removed on the fourth and fifth day. The gut sutures, on the contrary, were so far from

producing irritation that they might have been left in much longer. I feared, however, that the mischief might extend to them, and the test was sufficient. From that time I have exclusively used the silk-worm gut for sutures. I find that many surgeons are not aware of the difference between this material and catgut. There is nothing in common between them. The catgut softens, swells up, and melts away in the course of a few days, whereas the silk-worm gut remains unaltered for weeks, so long as any portion of it is exposed to the air. When totally shut in, it is probable that it disappears by absorption. In one case, I left in two of the loops, merely cutting the knot away; in another at the end of a fortnight the knot had buried itself into the tissues, and I merely cut off the short one of the projecting ends of the suture; and, in a third case, where the parietes were very thin, I accidentally cut both sides of the loop close to the knot. For several days the point of one end of the loop could be distinctly felt, but it finally disappeared. In not one of these cases has the suture been heard of again. Several times, when taking them out at the end of a fortnight, the deeper portions of the loops have presented the appearance of becoming blended with the tissues, and they have required an unusual amount of force for their extraction.

I am glad to find that silk-worm gut is making its way in professional estimation. I have taken every opportunity of urging its adoption, and it is satisfactory to me to find other workers in the field, such as Mr. Bryant, Dr. Heywood Smith, and Mr. Walters, of Reading. A short time ago, I removed five of these sutures from the vagina of a patient whose perinæum I had restored three weeks previously; not one of them had cut its way out, and there was absolutely no irritation about any of them. They might have been left in indefinitely, but for the chance of being a source of inconvenience in the case of a married woman. I repeat that I know of no substance which yields such satisfactory results in the closing of wounds.

LOCAL ANTISEPTIC TREATMENT OF SMALL-POX.

Dr. Ernst Schwimmer, of Buda-Pesth, having obtained no result from the internal administration of carbolic acid, salicylic acid, and thymol in small-pox, has tried the external use of carbolic acid and thymol. The formulæ which he employed were the following, a soft paste being made in each case: I. Carbolic acid, 4 to 10 parts; olive oil, 40 parts; finely powdered prepared chalk, 60 parts. 2. Carbolic acid, 5 parts; olive oil, very pure starch, of each 40 parts. 3. Thymol, 2 parts; linseed oil, 40 parts; prepared chalk, 60 parts. His principal object was to prevent the disfigurement of the face as much as possible. For this purpose, when the patients were admitted into hospital and the presence of an eruption of intense or confluent variola on the face was ascertained, the paste was ap-

plied to the parts on a linen mask, in which openings were cut for the eyes, nose and mouth. The greatest amount of success was obtained from the paste No. 1, which was used in 177 cases. Under its use the drying of the pustules took place some days earlier than usual, and in several cases no great amount of suppuration occurred on the face. That it was the carbolic acid which produced this favorable result, the author considers proved, not only by the fact that other ointments had been used on previous occasions without effect, but also by the circumstance that carbolic acid could be detected in the developed pustules after the paste had been applied four days, and that the urine gave the characteristic reaction of carbolic acid. Dr. Schwimmer strongly recommends the local application of carbolic acid in variola.—*Deutsches Archir für Klinische Medicin*, Band 25; and *Deutsche Medicin, Wochenscrift*, May 8th.—*British Medical Journal.*

NEW METHOD OF INTRA-UTERINE MEDICATION.

Dr. Robert Battey says: Eight years ago I was impressed with the opinion that the results obtained from intra-uterine medication by argentic nitrate and other escharotic remedies, as was then the custom in America, were very unsatisfactory. In my own practice it was a common observation that scanty menstruation of a permanent and intractable character followed upon the treatment, due apparently to a cicatricial condition of the endometrium left behind. In not a few cases stenosis of the os had to be remedied, and in some instances recurred time and again. In a few cases entire occlusion of the os occurred, and retained menses had to be evacuated.

In casting about for eligible substitutes, the iodine tincture and carbolic acid presented themselves, and were successively tried, both separately and in combination, but the results thus obtained were meagre and unsatisfactory. Theoretically, iodine appeared to offer decided advantages, not only as a local stimulant to the uterus, but, in consequence of its ready absorption, as a local and general alterative also, but the officinal tincture proved too feeble in power to secure satisfactory results, and the strongest preparation of Dr. Churchill, of Dublin, was to me then unknown.

The thought of employing carbolic acid as a solvent for iodine suggested itself, and experiment developed a knowledge of the remarkable solubility of the latter in liquefied acid. At first one drachm, then two, three, and four drachms of iodine was found to be soluble in an ounce of the acid. The last and strongest solution proved to be decidedly escharotic in its action upon the tissues, and especially upon heterologous growths of low vitality, and has been much used by the writer for attacking uterine cancer, and more particularly to supplement the curette. The standard solution employed in intra-

uterine medication consists of one part by weight of iodine dissolved in four parts of liquefied carbolic acid, and to this solution I have given the name iodized phenol.

Iodized phenol is believed to be simply a concentrated solution of iodine in carbolic acid, and not in a proper sense a chemical compound. It is black in color, syrupy in consistency, and possesses in marked degree the pungent order of iodine, which is rapidly given off when it is heated.

Since its introduction into my practice, the iodized phenol for intra-uterine medication has been employed by me to the almost entire exclusion of other remedies. In February, 1877, it was brought to the notice of the profession in America through the columns of the *American Practitioner*, and is to-day very much employed, but more especially in the Southern States. The recital of cases to illustrate its uses would be inconsistent with the brevity which should characterize the present writing, and hence it is proposed to present in general terms only the method of its application, and the results obtained from its use.

At first it was employed in a state of more or less dilution with glycerine, but more recently it has been used only in its full strength, the energy of the application being regulated by the quantity employed and the extent to which it is carried into the uterine cavity.

The instrument employed in making the application may be one of the many forms of applicators, so-called, or any uterine probe or sound which will easily enter the canal. It is my habit, and I specially prefer, to use a rather slender and elastic hard india-rubber probe, made slight-tapering, and with a blunt, not bulbous, point. The elasticity of this probe allows it to yield rapidly to pressure, to change its course, to follow easily the canal of the cervix, and to enter the uterine cavity proper, and this in spite even of a moderate flexion or version of the uterus. From the cotton factory is obtained cotton-wool in the form of an untwisted rope or roll, the fibres of the cotton being perfectly straight, and lying parallel to each other. It is technically known to the cotton spinners as "the lap," and can be purchased of the best quality at our factories for eight pence to ten pence sterling per pound. It is admirably suited for gynecological uses.

Mode of Application.—Having selected six or eight of the elastic probes, I break off from the cotton "lap" four or five inches, and with my fingers separate or split it into several fasciculi of such sizes as, when wound upon the probes, will enlarge them to the thickness desired. The end of a probe is now moistened slightly, and the fasciculus of cotton wound spirally upon it. The cotton-armed probe is now dipped into the iodized phenol, any redundancy is allowed to drip away, the probe is passed into the uterus with a slow spiral movement as it advances. At first the probe is introduced but a

short distance, and immediately withdrawn, and the case rests here to test the tolerance of the uterus for the remedy. At subsequent stages the probe may be carried to the fundus, and followed immediately by a second, and even by a third or fourth if well borne. The remainder of the probes are employed for wiping off the cervix or vaginal wall of any of the phenol that may have touched these tissues. The energy of the application is regulated by the size of the wrapping, the depth to which the probe is passed, and the number of medicated probes used. When a very decided impression is to be made, a backward turn is given to the probe in its withdrawal, so as to leave the saturated cotton in the uterus, there to remain twenty-four hours, or even until it is spontaneously expelled. The application is renewed every four or fourteen days, according to the energy of the treatment.

I have abandoned the use of sponge-tents in connection with the treatment set forth. When dilatation is required, the cotton-wrapped probe is employed, and the cotton left as a soft tent in the canal. The dilating power of this is notably less than of sponge, but nearly equal to sea-tangle, and it is believed entirely safe. The results are the following:

1. A perfect removal of all cervical mucus, which is promptly coagulated, and comes away closely adhering to the cotton. The probes subsequently passed bring the remedy directly in contact with the diseased membrane.

2. Always comparative, and usually entire, freedom from pain. This is a marked feature of the method, and in striking contrast with former experience. Carbolic acid is a local anesthetic, and so numbs sensibility as to make the energetic application of iodine for the most part entirely devoid of pain.

3. The iodine is so rapidly absorbed by the uterus that the patient remarks its metallic taste in the mouth and throat, ordinarily in five or ten minutes after the application.

4. Softening and more or less dilatation of the cervix and os.

5. There is temporary arrest of leucorrhea, followed by watery discharge, sometimes bloody.

6. There is exfoliation of the superficial layer of the mucous membrane, which comes away in shreds, sometimes entire, and resembles glove-kid.

7. Abrasions of the os promptly heal.

8. Indurations of the uterus disappear.

9. Leucorrhea is permanently arrested.

10. Villosities of the endometrium are removed without resort to the curette.

11. Subinvolution of the uterus disappears.

12. The menses become regular and healthy; menorrhagia and scanty menstruation are remedied.

13. The appetite and digestion improve, and this, in many instances, without the use of medicines.

14. So thoroughly is the system impregnated with iodine, that alteratives by the stomach are not used.

15. The form of the cervix and os is often completely changed; a large puffy cervix, with patulous, slit-like os, becomes even virginal in type after long use of the remedy.

16. Stenosis has not followed the treatment in cases noted.

17. Barrenness of nine to fourteen years' duration has been removed in several instances.

Remarks.—Rapid, and at the same time satisfactory, cure of chronic uterine ailments, such as are contemplated in this paper, is not attainable by any method of treatment known to me. It is not proposed that rapid cures can be made by the means herein set forth; on the contrary, the long standing and obstinate cases, such as usually fall in my hands, require many months for satisfactory cure.—*Bos. Med. and Surg. Journal.* —*Ohio Medical Recorder*, June, 1880.

ON THE TREATMENT OF CHRONIC DYSENTERY.

The castor-oil treatment may be advantageously employed in all stages of the disease—either at an early period, when the disease is subacute and the ulceration still extending, or when the process of repair is going on, and we are dealing merely with the ulcerated condition of the bowel; or when the ulcers have healed, and there remains a thickened and contracted condition of bowel, caused by cicatrization, with a mucous surface extremely liable to catarrh. It is apparently beneficial by causing a soft non-irritating flux from the small intestines, which sweeps before it scybalæ, decomposing shreds of mucous membrane, or food, and offensive discharges accumulated in the lower bowel. With respect to the dose, in twenty-one cases two drachms of the oil were administered every alternate night. Of these, six were discharged cured. In the remaining seventeen cases the oil was given twice a week in half ounce doses, and the number of cases discharged cured amounted to eleven. Each dose of castor oil was guarded by the addition of eight drops of laudanum. The administration of castor-oil does not usually lead to an immediate diminution of the number of stools, its first being to improve their character. By the end of the first or second week the stools become more feculent and less offensive, and the tormina and tenesmus are less urgent. The stools then gradually fall in number, preserving often a regular graduation, interrupted, however, by repeated relapses, each relapse, if treated promptly with ipecacuanha, being more manageable and of shorter duration. When castor-oil alone was relied on, the results were

not so satisfactory as when either a mixture of bismuth or hematoxylon was given at the same time, or at some period during treatment. Indeed, the most satistactory results were obtained with half an once of castor-oil administered twice a week, and a mixture of hematoxylon given three times a day.

With regard to the topical application of substances to the ulcerated surface by means of injections; in only one of the cases quoted was this tried, the administration of the oil being stopped during the case. The injection, which consisted of bismuth, was given twice, with the effect of at once increasing the number of stools, and adding greatly to the patient's distress. The enemata were at once discontinued, and the castor-oil treatment resumed, and the patient made a good recovery. In other cases where I have tried bismuth injections, and injections of other substances, the results have not been encouraging. In some cases, where ulceration was low down in the bowel, the injections sometimes seemed to do good.

Ipecacuanha powder was given in large dozes in seven cases, six for relapses during castor-oil treatment, and in one case on admissson. The dose ranged from twelve to twenty grains of the powder. In two cases in which the larger dose was given vomiting was produced; but with fifteen grains nothing beyond a feeling of nausea was complained of. Ipecacuanha is indicated whenever in the course of treatment the stools that had become feculent begin to loose their character, accompanied or preceded by abdominal pain and tenderness, with an increase of blood and slime in the stools and a return of tenesmus. A very sudden diminution in the number of stools passed daily is often a premonitory indication that a relapse is about to occur. As each relapse adds to the already existing debility and protracts the disease, it is of the utmost importance either to prevent their occurence or cut them short, if they have occured. Therefore, at the first indication, a full dose of ipecacuanha powder should at once be given.

Rest and strict attention to diet are essential to the cure of chronic dysentery. So long as there is tenesmus and much straining, and the stools contained blood and slime, the patient should be confined to bed, or at least remain in the horizontal position. When the stools become feculent, he may be permitted to sit up for a few hours daily, but till the stools have become consistent he should not be permitted to go out of doors; even then only in dry, warm weather. Exposure to cold and damp almost invariably causes a relapse. Nourishment should be given only in small quantities at a time. When the symptons are subacute, beef-tea must be chiefly relied on, and if the exhaustion is great, fluid extract of meat, or juice of raw beef, must be freely administered. As the more urgent symptoms subside, boiled fish may be given, and then minced meat (made from fresh, not cooked meat). The effect, however,

of the changes to a more solid diet should be carefully watched, for if given too soon, or in too large quantities, it will provoke a relapse. The best way is to begin with a very small ration, and increase it daily. Farinaceous food should be given in very small quantities, if at all. The digestive powers being usually enfeebled in chronic dysentery, some portion of the starchy matter may escape conversion into sugar, and, by decomposition in the large intestine, the uncoverted starchy material will give rise to flatulence, and to the formation of lactic acid. The same caution is necessary with regard to milk, which, if not speedly absorbed, rapidly undergoes lactic acid formation. Coffee and alcohol in any form are injurious, and should be abstained from. Fresh fruits in small quantities and lime-juice are beneficial, especially if there is a scorbutic taint, which is very common.—*Dr. Ralfe in London Lancet.*—*Western Lancet, June*, 1880.

THE DANGER OF VACCINATING A CHILD SUFFERING FROM SOME CUTANEOUS DISEASE.

There was an interesting discussion on this subject at the meeting of the Société Médicale des Hopitaux on the 23d April last. We take the following abstract from *Le Practicien* of May 3d.

M. Lereboullet stated that he had recently seen a child suffering with impetigo and an eruption of the hairy scalp, who had been vaccinated in spite of this eruption. On the fifth day, more than a hundred vaccine pustules were developed on the face where it had been affected with impetigo.

M. Marotte saw the child with him, and said he had frequently seen similar cases.

M. Besnier mentioned a case in which a child six months old was vaccinated on the 18th of February with virus from a heifer: only two pricks were made, but in spite of this precaution, on the third day, pustules began to appear elsewhere, and on the fifth day they were quite numerous on both arms and at the site of the eczema. The eruption lasted about ten days, and was followed by an abcess in the axilla.

M. Constantine Paul said that while a generalized vaccine eruption was rare, it undoubtedly occured sometimes. He had never been able to inoculate successfully from the pustules of this generalized vaccine.

M. Rendu said he had seen a genralized vaccine eruption in a young man, 17 or 18 years old. About the sixteenth or seventeenth day after vacination, he was taken with an intense fever, and a number of vaccine pustules appeared.

M. Hervieux recognized the existence of such generalized eruptions, and said that Cazenave, who had at first denied their occurrence, had subsequently acknowledged their occurrence. He stated also that Prof. Strohl, of Strasbourg, thought

that these generalized vaccine eruptions might give place to genuine small-pox, and prove the startling-point of an epidemic of this disease.—*Virginia Medical Monthly.*

RETAINED MENSTRUAL FLUID—METHOD OF REMOVAL.

Dr. O. S. Ward reported a case, as follows: On Wednesday last, he visited in consultation a very anemic girl aged 16 years, who, since May, 1879, had had each month pain and other symptoms of pregnancy, such as nausea, vomiting, development of areola and breasts, yet had never lost any blood. On examination, the abdomen was found enlarged to a size corresponding to the fifth month of pregnancy. Protruding from the vulva was an elastic mass, evidently containing fluid. The attending physician cut through the imperforate hymen and gave exit to the entire quantity of fluid at once—3¼ pints—perfectly odorless, dark as molasses, and the patient had done perfectly well. The entire body and cervix of the uterus were distended. After the fluid was removed, the vagina and uterus were syringed out with carbolized water, and firm contraction took place, especially of the vagina. He believed it was good surgery to evacuate the entire quantity of fluid at once, and then guard against sepsis by the use of carbolized injections.

Dr. Mundé remarked that we had to fear, not only sepsis, but regurgitation through the Fallopian tubes, which in such cases are supposed to be dilated.

Dr. Gillette thought, if there is a recognized element of danger in the rapid evacuation, there should be no objection to removing the fluid gradually. If the experience of those who had written upon the subject is reliable, we can hardly adopt the rapid and complete evacuation as a general method of treatment.

Dr. Ward could not see what would open the tubes in a uterus that had withstood the pressure for eight months, and at the time of the evacuation contracted as after labor.

Dr. Emmet asked if there was any case on record in which regurgitation through the Fallopian tubes has followed rapid evacuation of the fluid. He thought common sense suggested that the fluid should be allowed to escape as rapidly as possible. He had had excellent results in all his cases, and he had been careful to make the evacuation as rapidly as possible, and he had followed that course of treament because the other mode had been so disastrous.

Dr. Skene believed that such cases are dangerous, no matter what method is adopted in removing the fluid. A source of danger existed to which reference had not been made, and it was illustrated by referring to a hospital case in which the fluid was removed by rapid evacuation. The patient was 18 years

old, the uterus and the vagina were thoroughly distended, the fluid was evacuated promptly, the cavity was washed out with carbolized water, and every known precaution was carefully adopted to guard against septicemia. She did not have septicemia, but had such an intense inflammation of the uterus and the vagina that, when injectious were used, the fluid brought away large quantities of pus. The temperature was never as high as in septicemia, but as high as obtained in metritis, and the pulse was rapid. The patient ultimately recovered. Three years ago he operated on a similar case in private practice, allowing the fluid to drain away slowly through a small puncture, and that patient died very promptly.

Three weeks ago, he intended to evacuate rather slowly in a given case and watch the result, but the patient was hysterical and in some way sufficient pressure was brought to bear upon the uterus to rapidly evacuate its contents. She was left in the care of a physician who had never learned to take any precautions relating to sepsis, and she had done perfectly well. He believed there is a very marked tendency to inflammation in this class of cases; the mucous membrane, through prolonged contact with menstrual fluid, being placed in the best possible condition to take on inflammatory action from trifling causes. If so, he knew of no method which had any advantage over others in guarding against the occurence of inflammation. He thought that in the fatal cases death had been caused by inflammation more than from septicemia or shock incident to sudden removal or pressure, and in the future he should anticipate trouble from inflammation and nothing else. He did not believe that the operation could be performed by any method and first-class results obtained. Certainly, he should always have the patient understand that the operation is a dangerous one, and, in his opinion, the greatest danger is from inflammation.

Dr. Emmet remarked that, in a large proportion of fatal cases, the cause of death had been reported as rupture of Fallopian tube or regurgitation. To wash out the uterus promptly and insure firm contraction would lessen the dangers from that source; but, certainly, rapid evacuation would not guard against the occurrence of inflammation, although it does prevent danger from regurgitation.

The President thought the danger from inflammation depended upon the entrance of air into the flabby vagina and uterus, and that if they were made to contract firmly, that source of danger would be practically removed.

Dr. Emmet said, that in all the cases he had had in hospital practice, no death had occurred, nor had any inflammatory trouble followed the operation. His plan had been to remove the fluid as rapidly as possible, flood the uterus with hot water, insure contraction as quickly as possible, keep the

extremities warm, and give a dose of opium. He had not had a serious case in fifteen years.

Dr. Gillette suggested that the danger of inflammation occurring might come from sudden removal of support from the blood-vessels, as in removal of ascitic fluid without compensatory support by bandage, rather than from the entrance of air.

Dr. Harrison thought the greatest danger was the liability to rupture of the Fallopian tubes. He thought that regurgitation did not take place, but that there was a kind of vicarious menstruation in the Fallopian tube. Again, the danger is modified by the situation of the obstruction. If the hymen causes the obstruction, there is less danger than when the obstacle is situated higher up, for example, at the internal os. In the latter cases, there is very apt to be a dilatation of the tubes to a great degree, and sudden evacuation may lead to rupture of the tubes in consequence of their adhesions (the result of partial peritonitis) being torn, when uterus and tubes are suddenly displaced downwards.

Dr. Emmet thought the most dangerous cases are those in which there is congenital absence of the vagina with distended uterus. He thought it was rare for the Fallopian tubes to become distended when the vagina is previous.

Dr. Foster suggested that energtic contraction of the vagina might, when the opening in the hymen is not sufficiently large to allow the fluid to escape readily, force the fluid back through the tubes. Again he could conceive of danger arising from stretching or rupture of inflammatory deposits surrounding a distended uterus, when such a uterus contracted after being emptied either gradually or suddenly.—*American Journal of Obstetrics.*

FORCIBLE EXTRACTION BY A MIDWIFE OF THE ENTIRE UTERUS IN THE THIRD STAGE OF LABOR, WITH RECOVERY OF THE PATIENT.

During the night of 13th to 14th August, 1877, Dr. Hartwig, at Pyritz, Prussia, was called to see a primipara who, after the easy delivery of a living child, had fallen into a state of collapse. H. found the patient extremely anemic, with cold limbs; pulse hardly palpable. He was told that, after the child was born, the midwife tried to remove the placenta by traction on the cord, which, however, broke so that the midwife introduced her hand into the vagina, and brought out the placenta. Yet it seemed to her too small, and since the rather profuse flow of blood continued, she passed in her hand once more, in order to remove the rest of the after-birth. To the left side she found a spherical body that was movable, and

which she pulled out. At the same time, the patient complained of a severe and sharp pain in the left side, and continued to lose blood. When this tumor was shown to the doctor, he, at first sight, believe it to be a sarcomatous growth or fibro myoma. On closer examination, however, he found that it was the firmly contracted uterus. Undoubtedly the organ had not been inverted. The uterus is 15 cm. long, 14 cm. broad, 3 to 4 cm. thick. Its lower aperture is 7 cm. wide, and corresponds with a place a little below the internal orifice. The ovaries were left in the abdomen. In connection with the uterus there remained, on the left side, a small strip of the broad lig., a piece (11cm. long) of the tube, and a piece (5 cm. long) of the round ligament, while on the right side there was a considerable part of the broad ligament left, together with a piece 6 cm. long of the tube and round ligament. The seat of the placenta was on the posterior wall, on the left side, without any remnants of placenta on it. On examining the vagina, H. found it full of blood; higher up he found intestinal convolution. The vagina having been cleansed, a linen tampon was applied, wine and salicylate of soda was ordered. During the first three days only, the temperature rose as high as 38°, 39.2°, 38°; after this time the patient recovered very rapidly, and was soon out of bed. On the 21st day after the occurence of the injury, the roof of the vagina was found cicatrized and entirely closed, and the patient felt perfectly well. A very interesting symptom came on some time latter: polydipsia. The patient took from fifteen to twenty quarts of liquids in the twenty-four hours, and accordingly passed enormous quantities of urine, which contained neither albumen nor sugar. After one year's duration, and upon prolonged use of salicylate of soda, this polydipsia ceased. (Olshausen has seen a similar case of polydipsia after ovariotomy.) Sexual appetite is still present, though diminished: no pain during coition. Up to this day, *i. e.*, over a year since the injury happened, no molimina menstr.

Sch. has found recorded only four similar cases, In two instances, the midwives, on trying to remove the placenta, inverted the womb, drew it out through the vulva, and cut it off with scissors. Both patients recovered. In a third case, the English accoucheur Gaches not only pulled out the uterus, but also part of the colon; the patient died immediately afterwards. A fourth case is very similar to the one now reported. Fifteen days after delivery the patient was out of danger; half a year later a fecal fistula was left in the cicatrized fornix: it gradually closed.—(*Arch. f. Gynæk.*, XV., 1).—*American Journal of Obstetrics.*

A NEW METHOD OF ARRESTING GONORRHŒA.

Having been for some time past occupied with the problem of the infective diseases of wounds, the subject of gonorrhœa, as an affection probably belonging to the same class of diseases, has occupied my attention. The extreme contagiousness of this disease, the existence of a distinct periord of incubation, and the steady spread of the inflammation from a given spot, all point strongly to a parasitic origin. Acting on this idea, I made, in the spring of 1879, a number of inoculations of gonorrhœal pus, under certain precautions, into flasks containing infusion of meat, or infusion of cucumber. In these flasks micrococci grew in large numbers, and also sometimes bacteria, showing that these organisms were present in the gonorrhœl pus. Circumstances prevented me from pursuing this subject further at that time. In the mean time Dr. Neisser published an elaborate research on this subject, in which he showed the presence of enormous numbers of micrococci in gonorrhœal pus, and in the pus from contagious ophthalmia. He further asserted that these organisms were always of a definite size, and that they differed in respect of size from the micrococci found in in wounds. The presence of large numbers of micrococci in gonorrhœal pus has since been confirmed by several observers. Whether these micrococci are the cause of the gonorrhœal inflammation or not, I do not attempt to say, but the general history of the disease, taken together with these facts, points strongly to the idea that its essence consists in the growth of these or allied organisms.

If this disease be due to the spread of organisms, where are they situated? Several facts lead to the supposition that they are not only free in the urethral canal, but that they are also present in the substance of the inflamed mucous membrane. Thus, in the case of erysipelas, it has been demonstrated that the skin at the margin of the inflammatory redness is full of micrococci. Koch found, in his case of erysipelas in rabbits, that bacilli were present throughout the inflamed part, and coextensive with the inflammation. The same writer obtained a progressive gangrene of the tissues in mice by the injection of putrid blood; and he has demonstrated conclusively that this gangrene is due to an organism—streptococcus—which is present in large numbers around the limits of the gangrenous part. A similar observation was made by him in a case of spreading suppuration in rabbits. Mr. Lister has long held the opinion that, in the case of putrid sinuses, the organisms were present, not only in the canal of the sinus, but also in the substance of the unhealthy granulation-tissue lining them. This view has been justified by the fact that, though formerly, by the simple injection of the sinuses with antiseptics, he did not often succeed in eradicating the septic element, yet,

since he has adopted the use of Volkmann's sharp spoon, and has removed the layer of granlation-tissue lining them, success is by no means uncommon. And, lastly, I have demonstrated that, though many forms of organisms will not survive if introduced into a healthy animal, yet, if an animal be previously in a state of ill health, these forms of organisms are not destroyed, but may be found alive in the blood or tissues.

In the case of gonorrhœa, then, I suppose that, at the time of infection, a small number of the specific organisms, which in all probability possesses a considerable resisting power to the destroying action of the healthy living tissues, are retained in the urethra, that these go on developing, that the products of their growth irritate and weaken the mucous membrane in their vicinity, that the organisms can then penetrate into and live in that weakened tissue, and that the extension of this process over a portion of the mucous membrane of the urethra is the cause of the inflammatory symptoms.

Now, granting that this view, which I think must be admitted to be very probable, were proved, the problem to be solved for the cure of gonorrhœa would be, how to destroy these organisms without at the same time injuring the inflamed and highly sensitive mucous membrane. If they were destroyed, one would expect the extension of the disease to cease, and the inflamed mucous membrane to return more or less rapidly to a normal state. On thinking this matter over, two substances appeared to me suitable for this purpose, being powerfully antiseptic, and at the same time but little irritating. These are iodoform and oil of eucalyptus.

The next question was how to apply them. It is quite clear that, if used as an injection, there would be no certainity that they would be brought into contact with the whole of the inflamed surface, partly because the swollen mucous membrane would interfere with the passage of the fluid, and partly because the patient would not in many cases apply it effectually. At the same time, an injection could not be expected to do much good, for it will flow out very quickly, and the antiseptic would not have sufficient time to act. I therefore use these antiseptics mixed with cacao butter, and made into bougies of various lengths. These bougies are introtuced well into the urethra, and a strap and pad over and around the orifice retain them. The bougie rapidly melts, and the mucous membrane of the urethra remains bathed in the antiseptic material for any length of time desired. These bougies possess an additional advantage over injection in that from their size (they have a diameter of a No. 9 or 10 catheter, tapering at the point), they, so to speak, unfold the swollen mucous membrane, and thus cause the antiseptic to be more thoroughly applied.

I have tried the two antiseptics separately and I find that

they are most effectual when used in combination (possibly because iodoform is soluble to a considerable extent in oil of eucalyptus, and is thus brought into more perfect contact with the mucous membrane). The formula which seems best is five grains of iodoform* and ten minimis of oil of eucalyptus in a bougie of forty grains. These bougies have been made for me by Mr. Martindale, of new Cavendish street.

The specific cause of the disease being eradicated by this means, the question of further treatment arises. It seems to me that, although the development of the gonorrhœa is arrested, yet, if the discharge be allowed to become septic and irritating, urethritis might be kept up for some time. I, therefore, order an injection of boracic lotion (saturated aqueous solution of boracic acid), or an emulsion of eucalyptus oil, one ounce of eucalyptus oil, one ounce of gum acacia, water of twenty or forty ounces) to be used for two or three days. At the end of that time, injections of sulphate of zinc, two grains to the ounce, may be begun. At the same time, the great tendency of the urethral mucous membrane, when once inflamed, to remain in a state of inflammation, must be kept in mind, and everything which might tend to keep up the inflamed state must be removed. Notably, the patient must be cautioned against drinking, and it is well to order diluents and alkalies.

The method may be summed up as follows: The patient is first told to empty his bladder, partly to clear out his urethra, and partly to prevent the necessity of expelling the antiseptic from the canal for several hours. He then lies down on his back, and a bougie from four to six inches is introduced, and the orifice of the urethra closed by strapping. The bougie ought to be dipped in eucalyptus oil, or in carbolic oil (1—20) before insertion. The patient is instructe to refrain from passing water, if possible, for the next four or five hours. If the case be severe and advanced, he takes another bougie home, and is instructed to introduce it in the same manner after he next passes urine. On that evening, or on the following day, he commences the antiseptic injection, which he uses four or five times daily. On the third or fourth day, when the symptoms have entirely subsided, an injection of sulphate of zinc, two grains to the ounce,† is begun. At the same time the other points mentioned are attended to.

I have now used this method in about forty cases, and in all the result has been the arrest of the progress of the gonorrhœa. For a day or two the purulent discharge continues;

*A considerable number of the cases have been treated with bougies containing ten grains of iodoform; but Mr. Martindale informs me that during the warm weather it is almost impossible to make them. I find, however, that bougies containing five grains are quite satisfactory, and I have had no symptoms of irritation follow their use.

†In hospital practice, where the patient is only seen once a week, and where there is no great necessity for arresting the discharge quickly, I do not order the sulphate of zinc injection till the week following the introduction of the bougies.

but afterwards it steadily diminishes in amount, becoming in four or five days mucous, and ceases altogether in a week or ten days. At the same time, the scalding pain and the symptoms of inflammation rapidly diminish, and disappear completely in about thirty-six to forty-eight hours. In fact, the case becomes no longer one of virulent gonorrhœa, if properly treated.*

I have used this treatment only in the early stages of the disease, from the first to the seventh day after the commencement of the symptoms; but it has answered equally well in all. Thus, the following is the case in which it was used seven days after the commencement of the symptoms: The patient presented himself on June 19th, stating that the symptoms of gonorrhœa had existed for seven days. There was a profuse purulent discharge from the urethra; the penis was somewhat swollen and red; there was intense scalding when the urine was passed, and a constant feeling of heat and uneasiness; no chordee. A bougie, containing ten grains of iodoform and ten minims of eucalyptus oil, was passed down, and the orifice closed in the usual manner. The patient was also ordered an injection of an ounce of oil of eucalyptus and an ounce of gum acacie in a pint of water, to be commenced in the evening, and to be used four or five times daily. On the 19th, he again presented himself, and stated that he had not passed water till five hours after the introduction of the bougie; that the scalding and feeling of uneasiness rapidly subsided, and had completely ceased in forty-eight hours; and that the discharge had steadily decreased from the second day, and was now very small in quantity. He was ordered the sulphate of zinc injection, which completed the cure in three days.

In one case there was a recurrence of the symptoms. The patient, a hospital patient, first presented himself on June 5th, stating that on June 2d, five days after connection, a discharge had commenced, which had steadily increased, and was now profuse and accompanied with considerable uneasiness and scalding in passing urine. A bougie containing ten minims of oil of eucalyptus alone was inserted; no other treatment was ordered. On June 9th, he returned, stating that, after the introduction of the bougie the scalding and uneasiness had diminished, and had almost disappeared on the even-

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The course described here is that usually followed when boracic lotion has been employed as the injection, but since I have begun the use of the eucalyptus emulsion, the cessation of the discharge has, as a rule, been more rapid. Thus, to give an example, a patient came to the hospital on July 3rd with symptoms of gonorrhœa, which had lasted four days. He was suffering from a very acute attack, having severe scalding and commencing chordee. He had not previously suffered from gonorrhœa. A bougie containing five grains of iodoform and ten minims eucalyptus oil was introduced; and he was ordered to begin an injection of the eucalyptus emulsion (1 in 40) in the evening. The patient showed himself again on July 7th, and stated that in twenty-four hours the painful symptoms had entirely disappeared, and that the discharge diminished rapidly, and ceased altogether on July 6th. I have since that time had several nearly as rapid cases. I have tried in three cases injections of eucalyptus emulsion without previous introduction of bougie, but without any appreciable effect on the progress of the disease

ing of the 6th ; but that on the afternoon of the 7th they began to return, and were now more severe than on the 5th. I introduced a bougie containing ten grains of iodoform and ten minims of eucalyptus oil, and gave the patient another to insert at bedtime. At the same time, I ordered the injection of boracic lotion to be commenced on the following day. When seen again on the 16th, he stated that this time the treatment had been successful, and that now the discharge was very slight. An injection of sulphate of zinc and a mixture containing copabia were ordered, and the discharge ceased entirely on the 20th.

In two or three cases there has been slight increase in the scalding on the first or second occasion on which the patient passed urine after the introduction of the bougies ; but this has only been temporary, and these cases were as rapid as the others. In four instances, however, there has been considerable increase in the symptoms for twenty-four or thirty-six hours. In three of these the bougies had been made with bee's wax, and they did not melt properly, and consequently came out of the urethra at various periods as small cakes. Further, it seems that some iodine had been set free from the iodoform, probably during their manufacture. In the fourth case, four bougies, each containing 10 grains of iodoform, were introduced in succession. In all these, however, the symptoms passed off in about three days ; and then the gonorrhœa was found to be checked, just as in the other instances.

Such are the results as yet obtained by this method. I do not claim any specific power for the two substances I have mentioned. It may be that there are other antiseptics which would be more suitable, and I intend to test any which seem likely to yield good results. Whatever substance be used, however, I venture to think that the results already obtained show that the principle on which it ought to be applied, and on which it will prove most satisfactory, is that which I have attempted to indicate in this paper,

My thanks are due to my colleague, Mr. Royes Bell, for having allowed me to use some of his cases ; and to Mr. Farmer, the assistant house-surgeon, for carrying out the treatment in these instances.—W. Watson Cheyne, M. B., F. R. C. S., in *The British Medical Journal.*

ON GLYCERIN IN FLATULENCE, ACIDITY AND PYROSIS.

SIDNEY RINGER. M. D., and WILLIAM MURRELL, in the *Lancet.*

An old gentleman, who for many years suffered from distressing acidity, read in a daily paper that glycerin added to milk prevents its souring, and he reasoned thus : "If glycerin prevents milk turning sour, why should it not prevent me turning sour ?" and he resolved to try the efficacy of glycerin

for his acidity. The success of his experiment was complete, and whenever tormented by his old malady he cures himself by a resource to glycerin. Indeed he can now take articles of food from which he was previously compelled to abstain, provided that he always takes a dram of glycerin immediately before, with or directly after his food. He recommended this treatment to many of his friends (sufferers like himself) and one of these mentioned the above circumstances to us.

We have since largely employed glycerin, and find it not only very useful in acidity, but also in flatulence and pyrosis, and that it sometimes relieves pain. We meet with cases where flatulence, or acidity, or pyrosis is the only symptom, but more frequently these symptoms are combined. Some patients rift up huge quanties of wind without any other symptoms than depression of spirits: in others we get flatulence and acidity, one or other predominating; and we meet with others who suffer from acidity, flatulence and also pyrosis. In all these various forms we find glycerin usetul, and in the great majority of cases very useful. We do not mean to say that in all cases it is superior to other remedies for these complaints; indeed in several instances it has only partially succeeded, where other remedies at once cured. On the other hand, in some cases glycerin speedily and completly succeeded, where the commonly used remedies for acidity and flatulence completely failed. We do not pretend to estimate its relative value to other remedies; we are only anxious to draw atttention to its virtues.

Gas is in some instances formed in the stomach, in others in the large intestine, in some patients in both. Our observations were made in stomach flatulence, and as glycerine is so readily absorbed we should hardly expect that it would influence the formation of wind in the colon, except given in large doses, and when it acts as a slight laxative, and so expels the putrefying mass which forms the wind.

In some cases it removes pain and vomiting, probably like charcoal, by preventing the formation of acrid acids, which irritate delicate and irritable stomachs.

We suggest that it acts by retarding or preventing some forms of fermentation and of putrefaction. J. Mekulics (*Archiv. f. Klin. Chir.*) shows that glycerin prevents putrefaction of nitrogenous substances, as of blood diluted with water, which speedily decomposes at the ordinary temperature of the air. Two per cent. of glycerin retarded decomposition for twenty-four hours; ten per cent. for five days. If the fluid were placed in the hatching oven, then two per cent. retarded decomposition for several hours, ten per cent. for forty eight hours, and twenty per cent. altogether prevented putrefaction. He also proves that glycerin destroys bacteria and prevents the formation of septic poison, though it will dissolve and preserve the septic poison itself

Dr. E. Murk (*Virchow Archiv.*) finds that two to three per cent. will delay lactic fermentation in milk from eighteen to twenty-four hours.

Burnham Wilmot, 1860, says glycerin preserves meat so that after several months' immersion the meat is sweet and can be eaten; and Demarquay proves that both animal and vegetable substances may be kept from six weeks to two months by glycerin.

Glycerin, however, does not prevent the digestive action of pepsin and hydrochloric acid; hence, while it prevents the formation of wind and acidity, probably by checking fermentation, it in no way hinders digestion. We administer a dram to two drams either before, with or immediately after food. It may be given in water, coffee, tea or lemon and soda water. In tea and coffee it may replace sugar, a substance which greatly favors flatulence, as indeed does tea in many cases. In some instances a cure does not occur till the lapse of ten days or a fortnight.—*Louisville Med. News.*

TREATMENT OF CHOLERA INFANTUM.

Dr. Böing, of Uerdingen on the Rhine, states that he had remarkable success in an epidemic of cholera infantum last year with a treatment consisting of large doses of quinine and wine. He treated about fifty cases between two months and four years of age, and all recovered. Some of the children under one year of age were being brought up by hand. The quinine was given in divided doses every half-hour or hour, in a menstruum consisting of equal parts of mucilage, syrup of chamomile, and distilled water. To children under five months of age, 15 grains of quinine were given in 24 hours; to children from 5 to 10 months old, from 18 to 22 grains; and to children from 10 months to 4 years old, from 22 to 30 grains. When the dejections and vomited matters were acid, the addition of testa prep. or phosphate of lime seemed advantageous as long as the urine had an acid reaction, but seemed to increase the vomiting when the urine was alkaline. The wine used was Tokay; for the youngest children it was diluted with equal parts of boiled water, and a teaspoonful to a tablespoonful given every quarter-hour or hour. A moribund girl, three years of age, took nearly a pint of wine in 24 hours. Milk was given boiled and diluted with equal parts of boiled water. In some of the cases everything was vomited at first, but the treatment was persisted in, and after a short time the stomach retained all that was given. For the poorer patients a mixture containing acetic ether (℥. lxxv. pro die) or spirits of acetic ether (℥ ss. pro die) was substituted for the Wine. The acetic ether was used in preference to sulphuric ether, on account of its more agreeable taste and smell. Some of the patients were unable to swallow when first

seen. In these cases several subcutaneous injections of acetic ether were first administered at short intervals, and the Tokay was then given in teaspoonful or tablespoonful doses; the spoon was emptied. After a brief persistence in these measures, the children invariably regained the power of swallowing. Dr. Böing states that he confined himself strictly to the above treatment in all of the cases, and that he regards calomel, opium and cold applications as dangerous remedies. Should the treatment fail in any future trials, he proposes to give the quinine subcutaneously, or in doubled doses by injection. To relieve the thirst he would then give boiled water containing a little salicylic acid.—*Allg. Med. Cent. Zeit.*, June 26th.—*The Medical Record.*

THE SILK OF THE CORNSTALK IN THE TREATMENT OF AFFECTIONS OF THE BLADDER.

By Dr. Dassum,—(*L'Union Medicale*, April 5th, 1880.)

Since the first article published by this journal (*L'Union Medicale*) numerous observations have been published, which clearly show the value of this article in some of the affections of the bladder. We extract the following from the published reports:

Report of Dr. Dezotteux.—Retention of urine by a man of 70 years. The catheter was used the first evening and the following: The syrup of the stigma of mais, given in table spoonful doses every four hours, and the next morning the urine passed normally. The syrup was continued for some days and cure was complete.

Ibid. Cystitis, dysuria. Urine ammonical in a man of 68 years. Three doses of the syrup produced a marked improvement, and eight days effected complete relief.

Report of Dr. Lamy. Retention of urine dating ten years in a man of 78, who was accustomed to catheterize himself. One evening, after a full supper, he could not pass the sound, and finding himself bleeding considerably, Dr. Lamy was called, who succeeded, after great difficulty, in withdrawing the urine. For fifteen days the urine was withdrawn by means of the catheter. It had a strong ammoniacal odor, and exhibited morbid deposits. The bladder was washed with carbolized solutions every day. Alkaline drinks were administered and inunctions of belladonna and gelseminum practiced, but all without result. The infusion* of the cornstalk was then administered. From the second day the urine was passed normally and the infusion having been continued for a few days, the retention of ten years disappeared.

Ibid. Retention of urine for twenty years, in a man of 83 who

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* Fifteen grammes in 500 c. c. o water during the day.

had used the catheter daily. In using the catheter, violent tenesmus occurred and blood followed. Dr. L. administered the infusion of stigma of mais, and after the third dose the tenesmus ceased. During the night the urine was passed, quite colored with blood. The next day the blood had disappeared and permanent relief followed.

Report of Dr. Andre. A man, 42 years, has suffered ten years from chronic cystitis, a sequel of gleet. During this time he has complained of pains in the lower part of the abdomen, a burning sensation when passing water, and a bearing down sensation in the rectum and perineum. The urine deposited mucus and uric acid. During the last three years there has existed a constant and imperative desire to urinate. The urine soon became ammoniacal and finally it passed involuntarily. The classic treatment employed during the ten years was without result. The syrup in question was administered; no other medication. Eight days after, he went to the doctor's office completely relieved.

Dr. Dassum adds that the best mode of administering it, is in the form of syrup made from the extract; three tablespoonsful during the day in water. The syrup represents 27 grams of the extract to the liter.

The value of the silk seems to differ according to the way in which it has been collected or dried.

NOTE.—The French journals have published a good deal of late about the value of the corn silk, but no definite investigation seems to have been made of the active principle.—*Chicago Medical Journal and Examiner.*

EDITORIAL DEPARTMENT.

QUARANTINE CONFERENCE.

At the last meeting of the Louisiana State Board of Health, the following resolution was adopted:

Whereas, the American Public Health Association will meet at New Orleans November next, to consider sanitary matters, and knowing that nothing is more essential to the welfare of the States of Alabama, Texas, Mississippi, Tennessee, Arkansas, Kentucky, Georgia, Florida and Louisiana, and properly regulated and uniform measures, be it

Resolved, That this Board through its President, forward invitations to those different State and municipal Boards of Health, requesting them to send delegates from their respective bodies to a general quarantine conference, to meet in this city at that time to discuss those subjects so vital to sanitary and commercial welfare. Be it further

Resolved, That the National Board of Health be also requested to take part in their meetings.

PERSONAL.

Dr. Cabell, President of the National Board of Health, passed through New Orleans on his way to Ship and Round Islands, where he made inspections of the quarantine hospitals recently erected there. He was accompanied by Dr. S. M. Bemiss, member of the National Board of Health, and expressed himself well pleased at the work done, and was sanguine of the beneficial results to be obtained from these barriers to infection.

AMERICAN PUBLIC HEALTH ASSOCIATION.

This body will hold its next annual meeting in New Orleans early in the winter of 1880. We are glad to chronicle the fact that the prospect for a cordial reception of delegates is encouraging. The "Local Committee" has been fully organized and the chairmen of sub-committees appointed. The committee consists of delegates from the Louisiana State Board of Health, the Louisiana State Medical Society, the Orleans Parish Medical Society, the New Orleans Medical and Surgical Association, and the New Orleans Auxiliary Sanitary Association. Dr. D. C. Holliday is the chairman of the "Local Committee."

The meetings of this association have always been harmonius and full of interest. The questions discussed are of national importance, and it is to be hoped that the next meeting will be fully attended.

HEALTH OF NEW ORLEANS.

The month of August has been remarkably healthy, comparing favorably with the corresponding month of the past ten years. The records of the Board of Health are not yet

quite complete, but there is good reason for believing that the number of deaths has been less than has occurred in August since 1866.

Malarial fevers have increased, but the type of the disease is not malignant, and but few deaths occur from this cause. Cases of diphtheria and scarlet fever are occasionally reported. Measures are instituted to prevent their increase, and apparent success has attended the sanitary methods employed. Not a case of yellow fever has been reported.

Reviews and Book Notices.

Proceedings of the Connecticut Medical Society, 1880. *Eighty-ninth Annual Convention, held at New Haven, May 26th and 27th.* 8vo. Pp. 194.

A prominent feature of this volume consists of Matters of Professional Interest, in connection with the several counties of the State, from special reporters, including also a number of short papers, apparently selected from the proceedings of local medical societies for publication by the State Society.

In a dissertation on Some Limits in the use of the Ophthalmoscope, by Dr. W. H. Carmalt, the writer discourages those who hope to bring this instrument into general use for diagnosis or prognosis of cerebral diseases. In the first place, the skill of an expert would be required to make a thorough examination; secondly, the *personal equation* of each subject must be understood, to render the observation of any use; thirdly, some of the most experienced opthalmoscopists disclaim anything like infallibility in intrepreting the conditions found. In short, the writer does not regard the opthalmoscope as an instrument of precision in cerebral explorations.

Dr. H. P. Stearns, in an essay on the Insane Diathesis, treats the subject from the point of view of mental hygiene, rather than

heredity, as the title would seem to indicate. His view is certainly the more practical, and his ideas are sound, especially in his strictures upon the excessive strain imposed upon youthful minds in the modern high-pressure system of education.

Dr. J. P. C. Foster, in an essay on Hereditary Transmission of Syphilis, discusses several very interesting questions. One is, "Can the mother of syphilitic children remain healthy?" Of course it is understood that the father is syphilitic, and on this supposition he finds that a large proportion of the mothers remain untainted. Moreover, he remarks, "There is abundant evidence to prove that a woman who has borne syphilitic children by a syphilitic husband may subsequently bear perfectly healthly children by a healthy husband." Another question is, "Can the mother infect the fœtus through the utero-placental circulation?" This he answers in the negative, contrary to the prevailing opinion. The test case adduced for illustration is that of a woman who contracted syphilis about the middle of her first pregnancy, both she and her husband having been healthty at the beginning of the pregnancy. His child was born healthty and remained so. The woman subsequently aborted twice and afterwards bore two syphilitic children. He therefore concludes that "The hereditary transmission of syphilis occurs at the time of conception."

Dr. D. A. Cleveland, in an essay on A Notable Defect in Medical Education, points to the general neglect of the study of insanity by general practitioners, together with the importance of a general acquaintance with the subject among medical men.

Dr. N. E. Worden regards Examination of the Eye as a Help to the Diagnosis of Extra-ocular Disease in a much more favorable light than Dr. W. H. Carmalt, in the dissertation previously noted. It is well that these two papers appear in the same volume, so that the reader may study the evidence on both sides of the question.

These are the most important papers in the volume, and they give it a very fair standard among publications of this class.

S. S. H.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eighty-second annual session, held at Baltimore, April, 1880. 8 vo. Pp. 216.

The President, Prof. S. C. Chew, M. D., in his inaugural address upon Medicine in the Past and in the Future, displays a contrast by mention of some of the most important advances in medicine during the present century, particularly in diagnosis.

The Annual Address was delivered by Prof. Jno. W. Mallet, of Univ., Va., on the Claims of Science for its own Sake upon the Medical Profession. He shows how the pursuit of pure science often results in its application to the useful arts and to the promotion of curative medicine, although no anticipation of such practical results could have been made; also the importance of scientific culture as a foundation for medical education.

Reports are presented by committees on the different branches of practical medicine. In that of Obstetrics and Gynecology attention is called to Prof. Porro's modification of the Caesarian section, which consists in ablation of the uterus after the removal of the child by the usual section. The results of the operation compare favorably with those of the old method. The disadvantage of unsexing the woman is perhaps fully compensated by the gain of complete immunity from further trouble of a like nature, which the old operation does not confer.

Dr. Jas. A. Steuart, in his report for the section on Sanitary Science, calls attention to the pollution of drinking water in Baltimore by faulty privy arrangements. The privy receptacles are wells sunk into the ground until water is reached, so deep that many of them are never emptied. Until recently the drinking water was mainly supplied by wells, 600 in number, and chemical analysis showed the water greatly contaminated with ammonia and albuminoid ammonia; consequently many have been condemned, but the whole matter needs reforming. In spite of this unwholesome and disgusting arrangement, it is claimed that Baltimore stands fourth among the large cities of this country in point of public health, the more

fortunate cities being St. Louis, San Francisco and Philadelphia.

Dr. I. D. Thompson, in answer to this question—What can be done for our Imbeciles?—shows the benefits conferred by special institutions in training this unfortunate class of beings, by which a large proportion of them may be fitted for self-support and usefulness in some humble sphere of life.

In a report presented to the Section on Ophthalmology and Otology, Prof. Julian J. Chisolm, M. D., recommends Optico-ciliary Neurotomy as a substitute for extirpation of a lost and painful eye-ball. The only drawback is liability to re-union of the divided nerve, in some cases. The advantages are obvious.

Dr. George Reuling advocates "The extraction of cataract within the capsule, based on 200 operations after this method": that is, he removes the lens together with its capsule, without opening the latter. He does not claim the invention of this method, but asserts its practicability, in face of previous failures.

There are some other papers of less importance, which we have no space to notice. On the whole the volume presents a respectable contribution to medical progress. S. S. H.

Official Register of Physicians and Midwives, to whom Certificates have been issued by the Illinois State Board of Health, under the Act of May 29, 1877; *and of Physicians and Midwives who have registered in the County Clerks' Office, under the Act of May* 25, 1877, *and who claim to have practiced in Illinois ten years prior to July* 1, 1877, *but to whom no Certificates have been issued.* 8vo. Pp. 286. 1880.

The Act above referred to provides, under suitable penalties, that all practitioners of medicine and midwifery in the State of Illinois shall either present to the Sate Board of Health diplomas from "legally chartered medical institutions in good standing," or submit to examination by said Board, which thereupon issues certificates accordingly. It is also required of all practitioners to record their certificates at the office of the county clerks. Those who have practiced ten years in the State, previous to July 1, 1877, are exempted from the provisions of the act. The law does not discriminate between regular

and irregular practitioners, and the Board has issued certificates to the graduates of Homœopathic, Eclectic, Physio-medical, and Women's Medical Colleges regular and irregular.

The following extract from the summary will give some idea of the working of the act:

Total number of practitioners July 1, 1877, about	7,400
Graduates and licentiates, about	3,600
Non-graduates, about	3,800
Certificates issued to Jun. 11, '80, on diplomas and licenses,	4,655
" " " " 14, '80, on years of practice	1,026
" " " " 11, '80, upon examination	191
Total certificates issued to physicians	5,872
Graduates and licentiates now in the State, about	4,825
Non graduates now in the State, about	1,500
Less practitioners in the State than when law went in effect, about	1,050
Less unqualified practitioners in the State than when law went into effect, about	1,750

OF CERTIFICATES ISSUED TO GRADUATES,

There were from Regular Schools	3,688
" " " Eclectic "	501
" " " Homœopathic Schools	430
" " " Physio-medical "	36
Total	4,655

The Board found 423 diplomas, which they judged to have been either bought outright or obtained after mere nominal examination. Nearly one-half of these were issued at Philadelphia, and most of the remainder at Cincinnati and St. Louis.

The register is arranged by counties, in tabular form under the following heads:

Name; When Registered; School of Practice; Post-Office or Residence; Age; Nativity; Years of practice, total, and in the State; Date of certificate from Board of Health; Institution granting diploma; Date of same; Date of recordation of same. There are also alphabetical indexes of physicians, of midwives and of towns.

The immense amount of labor expended by the Illinois State Board of Health in carrying out the medical act is amply repaid in the benefits which result to the public from the partial suppression of quackery and the elevation of the general standard of proficiency. As to the members of the Board, they must be satisfied that "Virtue is its own reward."

In regard to the merits of the plan, we deem it far from perfection, for the possession of a diploma legally valid is no guaranty of medical proficiency. The Alabama plan we consider decidedly better, according to which medical diplomas are disregarded, and all who purpose to practice medicine are subjected to examination; with this reservation, that those intending to practice any exclusive system need not be examined on therapeutics. The examinations are conducted by boards from the state and county medical societies. But, so far as we are informed, no register of medical practitioners has yet been prepared in Alabama.

It is certainly desirable that there should be a body of medical practitioners possessing guaranteed qualifications, and that a published list of their names should be accessible to all parties interested. We are not yet satisfied that quackery can be outlawed to any degree approaching suppression, for a large number of people are constantly looking for a suspension of nature's laws, and will not be denied the services of those who deal in the mysterious and supernatural. It is evident that any movement towards fixing a standard of professional attainments must, in the future as in the past, originate among medical men, and those who decide to draw a line of demarcation should organize and themselves submit to the same test which they would impose on others. The trouble is, that those who make most noise about the abuses of quackery, are the ones least willing to put forth any personal effort towards eradicating it. But we find in sacred history a notable exception in point. When Abraham proposed to found a nation, he imposed a mark to distinguish his family from other people. It is noteworthy that he did not make an exception in his own person, and it is not improbable that this impartiality at the beginning has conduced materially to the perpetuity of the ceremony and of the people. Would it not be profitable for med

cal reformers to make an application of this somewhat familiar record to their own case? S. S. H.

Transactions of the State Medical Society of Arkansas, at its Fifth Annual Session. 8vo. Pp. 120.

The meeting took place at Little Rock, in May, 1880.

The President, Dr. E. T. Dale, in his address, advocates the passage of a law to regulate the practice of medicine, and he would have the qualifications determined by actual examination, without regard to possession of a diploma. The general adoption of this plan throughout the country would put an effectual stop to the manufacture of spurious diplomas, and be very discouraging to cheap medical schools. Dr. Dale also puts in a plea for a legalized and endowed State Board of Health and a State Lunatic Asylum.

Dr. D. A. Linthicum, in the Report on State Medicine, commends the Alabama plan of legally constituting the State Medical Society a State Board of Health, and giving it power to regulate the practice of medicine in the State.

Dr. J. B. Cummings gives an account of the Yellow Fever, as it appeared in Forrest City, Ark., during the summer of 1879. It is to be regretted that he does not attempt to explain the cause or mode of its appearance.

Dr. J. H. Southall makes known an important legal decision rendered by Judge W. D. Jacoway, on a motion made in behalf of Drs. Breysacher and Southall, for their release from a subpœna requiring their attendance as medical experts without extra compensation. The Court held, that they could not be compelled to testify as experts, unless paid as such; and, as the party causing them to be summoned declined to pay expert fees, they were discharged from attendance.

In the report of the State Board of Health, Dr. Linthicum describes its operations relative to quarantine, occasioned by outbreaks of yellow fever at Memphis and Forrest City. It is to be remarked that this board has no legal existence, being only a committee chosen by the State Medical Society, as an advisory body. The emergency called it into activity and gave it recognition by the Governor of the State and by the National

Board of Health; and it is to be hoped that the Legislature of the State may see the necessity of providing for its legal status.

There are several articles on subjects belonging to branches of practical medicine, which need not be noted here.

The large membership of this Society gives favorable augury of its future success, and should excite an emulation across the border, among our Louisiana brethren, to sustain more liberally our State Medical Society. A neglect of the rules of orthography and syntax by some of the contributors is a serious blemish to this volume, which might have been remedied by a careful publishing committee.

S. S. H.

Books and Pamphlets Received.

Practical Hints Relating to Yellow Fever. By Robert B. S. Hargis, M. D., Pensacola Fla. Reprint from the Independent Practitioner, July, 1880.

The De Lesseps Canal in its Relation Hygiene. By G. Halstead Boyland, M. A., M. D., etc., Late Surgeon French Army, etc. etc.

Medical College of Ohio, Cincinnati. Sixtieth Annual Catalogue and Announcement, Session of 1880-81.

Optico-Ciliary Neurotomy. The Proposed substitute for extirpation of a Lost and Painful Eye Ball. By Julian J. Chisolm, M. D., Professor of Eye and Ear Surgery in the University of Maryland, etc. Reprint from Transactions of the Medical and Chirurgical Faculty of Maryland, 1880.

Sixth Annual Announcement of the Medical Department, University of Nashville (Tenn.) Medical College, Session of 1880-81.

Michigan College of Medicine, Detroit, Mich.; Announcement for Session 1880-81.

National Sanitation. By J. C. Le Hardy, M. D., Savannah, Ga.

A Treatise on Milk and Henri Nestles' Milk Food. For the Earliest Period of Infancy and in Later Years. By H. Lebert, Medical Privy Councillor and Professor.

Report of Committee on Construction and Management of Privies, made to The Executive Committee of the Auxiliary Sanitary Association, April 17th, 1880.

College of Physicians and Surgeons, Medical Department of Columbia College, in the City of New York. Seventy-Third Annual Catalogue and Announcement, May, 1880.

On Coccygodynia; A Lecture delivered in Chicago Medical College, March 20, 1880. By Edward W. Jenks, M. D., L. L. D., Professor of Medical and Surgical Diseases of Women and Clinical Gynecology, in Chicago Medical College, etc. etc. Reprint from the Medical Record, April 17th, 1880.

The Treatment of Puerperal Septicemia by Intra-Uterine Injections. By Edward W. Jenks, M. D., L. L. D., Chicago Ills. Reprint from Vol. IV., Gynecological Transactions, 1880.

Report of the Indiana State Health Commission Reprint from The Report of the Bureau of Statistics for 1879.

Trustees, Faculty and Graduates of Detroit Medical College. List of their Names, from 1869 *to* 1881.

Questions Submitted to the Graduating Classes of the Medical College of Ohio, from 1871-72.

A New Eye Bandage. By Samuel Theobold, M. D., Baltimore, Md. Reprint from the Archives of Opthalmology, Vol. IX, June 1, 1880.

Peptonised Milk as Food for Infants and Invalids. By R. J. Nunn, M. D., Prof. Theory and Practice of Medicine in Savannah Medical College, Savannah, Ga. Reprint from the American Journal of Obstetrics and Diseases of Women and Children, Vol. XIII, July, 1880.

A Catalogue of the Academical Department of the University of Louisiana, and its Adjunct High School, New Orleans, La. Second Session, 1879-80.

Meteorological Summary—July.
Station—New Orleans.

Date.	Daily Mean Barometer	Daily Mean Temperature.	Daily Mean Humidity.	Prevailing Direction of Wind.	Daily Rain-fall.	General Items.
1	30.109	80.7	79.7	S. E.	1.64	Mean Bar. 30.062.
2	30.070	85.2	71.0	South	.00	Highest Barometer, 9th, 30.178.
3	30.070	84.7	63.0	South	.00	Lowest Barometer, 29th, 29.973.
4	30.078	85.2	61.7	West.	.00	Monthly Range of Barometer, 0.205.
5	30.075	86.7	62.3	South	.50	Highest Temperature, 92° on 5th.
6	30.078	81.2	73.3	South	1.10	Lowest Temperature, 71° on 23d.
7	30.114	80.7	78.7	South	.24	Monthly Range of Temperature, 21°.
8	30.146	79.2	78.0	South	1.68	Greatest Daily Range of Temperature, 15° on 1st and 14th.
9	30.132	81.0	77.0	S. E.	.08	
10	30.088	83.2	71.0	S. E.	.00	Least Daily Range of Temp., 9° on 22d.
11	30.087	84.0	69.7	East.	.36	Mean of Maximum Temperatures, 88°9.
12	30.145	82.5	70.1	West.	.02	Mean of Minimum Temp., 75°22.
13	30.047	81.7	72.3	East.	.07	Mean Daily Range of Temp., 12°23.
14	30.022	82.5	70.7	South	.57	Prevailing Direction of Wind, S. E.
15	30.011	83.0	74.7	South	.28	Total Movement of Wind, 3,388 miles.
16	30.017	83.5	67.3	S. W.	....	Highest Velocity of Wind and Direction, 21 miles, N. W. on 22d.
17	30.035	83.5	71.7	N.W.	.00	
18	30.030	85.0	61.7	N.W.	.00	Number of Clear Days, 5.
19	29.993	85.5	61.0	N.W.	.00	Number of Fair Days, 16.
20	30.047	82.0	74.7	N.W.	.01	Number of Cloudy days on which no Rain fell, 2.
21	30.063	82.2	74.7	S.W.	.04	
22	30.057	77.5	82.3	S.W.	1.26	Number of Cloudy Days on which Rain fell, 8. Total number of days on which rain fell, 21.
23	30.044	77.2	75.0	North	.04	
24	30.063	79.2	70.0	East.	.00	
25	30.073	81.7	71.7	S. E.	.75	Dates of Luna Halos, 18th, 20th, 21st.
26	30.063	80.5	76.7	S. E.	.82	
27	30.085	79.2	83.7	S. E.	.42	
28	30.037	79.5	82.3	East.	.07	
29	29.988	78.2	84.0	South	1.10	
30	29.996	79.5	80.0	S. W.	.03	
31	30.071	81.2	73.7	East.	.00	
Sums	951.911	2533.9	2263.7			
Means	30.062	81.7	73.0	S. E.	11.22	

COMPARATIVE TEMPERATURE.

1871		1876	83°.37
1872		1877	83°.7
1873	82°.41	1878	84°.1
1874	81°.39	1879	82°.9
1875	81°.76	1880	81°.7

COMPARATIVE PRECIPITATION

1871	inches.	1876	4.73 inches
1872	"	1877	6.41 "
1873.	6.27 "	1878	6.21 "
1874.	12.93 "	1879	7.04 "
1875.	6.57 "	1880	11.22 "

JAMES A. BARRY,
Sergeant, Signal Corps, U. S. A.

Mortality in New Orleans from July 17th, 1880, to August 21st, inclusive.

Week Ending	Yellow Fever.	Malarial Fever.	Consumption.	Small-pox.	Pneumonia.	Total Mortality.
July 24	0	8	18	0	2	93
July 31	0	3	16	0	5	76
August 7	0	4	11	0	1	89
August 14	0	6	11	0	3	72
August 21	0	5	18	0	3	107
Total....	0	26	74	0	14	437

NEW ORLEANS

MEDICAL AND SURGICAL JOURNAL.

OCTOBER, 1880.

ORIGINAL COMMUNICATIONS.

The Origin, and some Properties of the Poison of Yellow Fever, and of other Specific Spreading Diseases.*

By STANFORD E. CHAILLÉ, M. D.,

Professor of Physiology and Pathological Anatomy, Medical Department, Univ. of La.

"The dominant mind of Aristotle [350 B. C.] stamped its notions on the world at large. For nearly twenty centuries after him, men found no difficulty in believing in cases of spontaneous generation, which would now be regarded as monstrous by the most fanatical supporter of the doctrine. Shell-fish of all kinds were considered to be without parental origin. Eels were supposed to spring spontaneously from the fat ooze of the Nile. Caterpillars were the spontaneous products of the leaves on which they fed, while winged insects, serpents, rats, and mice, were all thought capable of being generated without sexual intervention" (Tyndall). The influence of these ideas was so great, that it is only a few generations since a high court legitimatized a child on the ground, that the mother, separated for four years from her husband, had been impregnated by a dream!

But, in nothing, has this influence been more marked, than in the views advocated respecting the causation of epidemic

* A chapter from the Final Report to the United States National Board of Health, of the chairman of the Havana yellow fever Commission of 1879.

diseases. There is not one of these, the origin of which has not been attributed to such causes as,—"hell itself breathes out contagion to this world," "spasmodic convulsions of the sickened earth," air corrupted by the aggregation of many races, malign influences of the sun, moon, stars, comets, earthquakes, volcanoes, tornadoes, inundations, "cosmo-telluric" influences, putrid emanations, etc., etc. Not until Frascator's work, in 1550, was the modern idea of contagion taught. The spontaneous origin of hydrophobia was long obstinately advocated. Even small-pox was assigned a de novo origin, in such causes, as those above mentioned, until early in the 18th century, when Boerhave first established that it was never due to spontaneous development, but always to a specific contagious poison. The same fact was not established as to measles until the middle of the 18th century; and cases of the spontaneous origin of scarlatina, though it never reached North America until 1735, nor South America until 1829, are still occasionally claimed to occur. It is less than thirty years, since Budd denied the spontaneous origin of typhoid fever, an origin still contended for by some. In fine, modern research has tended constantly to prove that disease, above all, migratory epidemic diseases, have no such origin; and the spontaneous generation—experiments, as well as the whole tendency of modern science are opposed to any such belief. None the less, "indigenous," "spontaneous," "de novo" origin and development, are words incessantly repeated in the present literature of yellow fever, and express ideas firmly entertained by many, especially by those who reside in habitually infected places,—the worst of all places in which to solve such a question.

There are three chief causes for the belief in the spontaneous origin of yellow fever. Some, more deeply impressed by past than by recent knowledge, are not able to understand that a disease may not be personally contagious in the manner of small-pox, measles, etc., and yet, may be portable and communicable, as are trichina, tape worm, typhoid fever and cholera. A second cause is the very old one, of mistaking those causes, which favor the propagation of a poison for those

which originate it. Finally, disbelief in the duration of the dormant vitality of disease—poisons, is a constant source of error. Correct views in respect to these matters are of great moment in practical sanitation, and some of the points involved will receive brief consideration.

The poison of yellow fever must be, one the one hand, either an inorganic or dead organic substance, or, on the other hand, a living organism. Very few, if any, even of those who credit its spontaneous origin, deny that this poison has reproductive power. The function of reproduction is limited to living organisms, and such must be the nature of the poison of yellow fever. This conclusion is inevitable unless it can be proved, either that the poison has not the power of self-multiplication, or that other than living organisms have this power; and, until at least one of these improbable hypotheses is proved to be true, science is justified in both thinking and acting upon the above conclusion.* Those who demur to this conclusion demand ocular evidence of the organism, evidence, which, though most desirable, is no more necessary to justify a conclusion, than chemical or microscopic evidence is necessary to justify the conclusion that the poison is an inorganic dead substance.

Sir Henry Holland teaches, "Locke says, 'in all the corporeal world we see no chasms or gaps.'" Our actual knowledge proves such gradations in the minute forms of life, that, to suppose other extra-miscroscopic forms do not exist implies a breach of continuity not justified in the scale of life. Only of late, a new world has been opened by the microscope, before which innumerable forms of life, now visible, were invisible. It is then logical to believe, that there are still invisible forms of organic life." This belief is just as logical, as is the universal belief in invisible, extra-microscopic atoms and molecules. It has been wisely taught, that the true test of the presence of a living organism is, not the microscope, but that, "when sown, it produces an organism," and, the "subsidence-experiments"

* The total failure of inorganic chemistry and toxicology to furnish any invisible poison analogous, in its modes of action, to the poisons of migratory spreading diseases is well known; as is also the failure of organic chemistry to furnish any substance, which destitute of life, has the power of self-multiplication. Yet, says Lister, it is *conceivable* that there may exist and may yet be found a non-living substance acting on a resolvable substance, in such manner, that one of the substances resolved should itself be the resolvent.

of Pasteur and Tyndall, as also the "sunbeam experiments" of the latter, have conclusively demonstrated the presence in both air and liquids of extra-microscopic particles, which, when sown, germinated. It is manifest, that the failure of the microscope to prove that the causes of yellow fever, as also of typhoid fever, cholera, etc., are living organisms, no more disproves this, than the failure of all the appliances of science to prove that the cause is an inorganic or a dead substance disproves this conclusion; and, the mystery, as to what is, in truth, the poison, is increased by supposing it an unknown inorganic *something*, rather than an unknown extra-microscopic organism. Should conclusive proof of the latter ever be secured, it would become only an additional illustration of nature's great law—the destruction of living beings, one by another.

Discarding all opposing views, it remains certain, that the route to the unknown is through that which is known; and, granting our ignorance of the poison of yellow fever, we are justified in seeking analogies for it in the known properties, either of any other spreading disease-poisons, or of objects allied thereto.

These poisons are markedly characterized by one of the most striking differences between living organisms, and inorganic or dead matter, viz: by the fact that their growth and reproduction occur only under special circumstances. They have either climatic limits, or are greatly influenced by climate; they are, at one time, narrowly localized, at another widely radiated; and, they repeatedly refuse to propagate under circumstances apparently identical with those under which they have, on other occasions, best flourished.

All the spreading disease-poisons seem to grow best in decaying, putrefying substances, one of the most noted traits of the fungi; and in the peculiarity of the circumstances required for the propagation of these is also found the best analogies to the often inexplicable appearance and disappearance of disease-poisons.

Microscopic fungi are now known to produce a large number of diseases, such as potato-rot in the vegetable, and pebrine in

animal kingdom; and experts in cryptogamic botany teach numerous facts, apposite to the present subject. They are "nature's scavengers," and "are distinguished for their diffusion, number, poisonous properties, minuteness of their spores,* and for their love of darkness, tainted soils, and heavy atmospheres." There are still a number of them, which, though often seen flourishing, and though the surrounding conditions on which this depends are open to observation, have defied numerous, prolonged, and most careful attempts to solve the mystery of their germination and cultivation. Experiments, imitating all the apparent conditions under which they are seen to flourish, are not followed by success, thus demonstrating that their growth depends on some curious unknown condition associated with the known conditions. The great majority of them flourish chiefly at the end of summer and in autumn; some grow best in air, others when deprived of it; some require light, others darkness; many will germinate only in a humid atmosphere, others must float on water, and some must be immersed in it; some will germinate only in such dark, damp, confined places, as the holds of ships: some require such peculiar local conditions as immersion in a special fluid, for instance, dying in water but flourishing in orange juice; some grow only in rotten wood, while others require the bark and leaves of living trees, even of some special tree: some must have a dung-hill, and others an old damp carpet; in one, a crop can only be secured by the passage of the spores through the intestines of a horse, and their growth in the expelled excrement; and so on, through an infinite diversity of very peculiar local conditions.

Some have appeared in places, wholly excluded from the external air, others in inorganic and poisonous solutions supposed to be destructive to vegetable life, (Cooke & Berkley). Fungi are very prone to shift their localities, at times disappearing from places where they once flourished. Within the last ten years, one, the "puccinia malvacearum," was imported from Australia to England, and in 1874 it was spreading so violently that it was feared hollyhocks would be exterminated.

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* Some spores are so minute, that the microscope detects them, only, when aggregated *en masse*.

No one knows how or when it was imported, but, since Australia was known to be its habitat, no one has supposed that it originated de novo in England. Fungi have three additional peculiarities worth noting. Some "have in a high degree the curious property of destroying their own reproductive powers, or of poisoning against themselves the soil in which they grow"; and thus serve to account for their sudden disappearance after years of prevalence, and for their subsequent reappearance. "Some, which are generally eaten with safety, become, through the influence of climate, poisonous, and some of the poisonous kinds become esculent;" some are alleged to be poisonous when developed at night, but hurtless if developed by day; and at times the poisonous principle is so volatile and fugacious, that drying, boiling or macerating the fungus in weak solutions causes its poison to disappear. Finally "recent investigations tend to confirm the distinct specific characters of the species found on different plants, and to prove that the parasite of one host will not vegetate on another, however closely allied." Since this is true of the parasites which attack animals, as well as vegetables, it is possible, that a special parasite might be, as is yellow fever, more partial to man than to inferior animals, and more partial to a white, than to a black man. An additional fact, concerning the lowest microscopic organisms, and of interest in the present connection, is recorded by Dr. W. W. Cheyne, who says (p. 124, British Medical Journal, July 24th, 1880): "I have demonstrated that, though many forms of organisms will not survive if introduced into a healthy animal, yet, if an animal be previously in a state of ill health, these forms of organisms are not destroyed, but may be found alive in the blood or tissue.

It is also worthy of note, that a number of animal parasites are now known, which pass through several stages of development, each stage requiring its own special and peculiar favorable conditions, and that in only one of these stages does it cause disease. Bots in the horse are parasites only in the larval, and not in the pupal, nor in the matured stage; the larvæ of the tape worm infest certain animals, and must be eaten by other animals to develop into maturity; the egg of

the thorn-headed worm of the hog develops in a crab, this must be eaten by a fish, and this by a hog to gain the stage of maturity; the "rot" in sheep is due to the fluke-worm, the eggs of which require, for their first stage of development, that they should be eaten by a fresh water snail. In all instances, the undeveloped eggs are harmless.

Further, the periodical occurrence of yellow fever, says Reynolds' System of Medicine, "has its parallel in a fact well known to the students of the diatomacæ, and dermidiacæ, namely, that particular species, which are known to exist in a definite pond or pool one season, may at another season be replaced by forms never before detected in the same spot: while again, the original species, under favorable, and often unaccountable circumstances, reappear after the lapse of a certain time.*

Preceding facts have not been presented, nor are they claimed, to prove that the poison of yellow fever is a parasite; but, to show that some of the mysterious phenomena of the unknown and invisible poison of yellow fever have their counterparts in similar phenomena of known and visible living organisms; to point out, how peculiar may be the local conditions requisite to their growth; and to prove that our ignorance as to these phenomena and conditions in the one, which is unknown and invisible, is no greater than in the other, though well-known, very visible, and subjected to circumstances much more favorable for elucidation by scientific research. Such facts enable us better to understand, among other things, why the poison of yellow fever should much more frequently fail, than it succeeds, to propagate when imported—the success or failure depending on some perhaps most trifling, though disastrous, contingency. The failures, difficulties, and successes attending the domestication of numerous vegetables, animals, and disease-poisons, when transplanted to foreign localities is well-known, and this view of the vagaries in the transplantation of the poison of yellow fever better accords with present knowledge, than the

* Greissinger proffers the following truth, and pregnant warning: "A series of years often pass during which yellow fever is scarcely observable in the very places it specially frequents, and this, though there may be no difference in the going and coming of unacclimated strangers. Then, there is rejoicing over the presumed disappearrnce and destruction of the disease, and a triumph of sanitary police over it is often claimed."

view which assigns to this poison a spontaneous origin. In fine, Dr. Alf. Carpenter well observes, "there is nothing more curious or out of the way in the rise and fall of epidemics, than there is in the abundance or scarcity of certain forms of vegetable life, according as the season is dry or moist, or hot or cold, and according as the material required for its nourishment is abundant or the contrary." (*Br. Med. Journal*, October, 1879.)

Since success in the execution of sanitary measures largely depends on the unanimity with which these are advocated, it becomes an important duty to strive to throw light on every difference of opinion, which leads to difference of sanitary practice. One of the most important issues, respecting yellow fever, is its true relationship to local conditions; whether both the origin and the propagation, or only the propagation of the poison depend on these? In addition to reasons already stated against such an origin, it seems incredible that any migratory disease can thus originate; incredible that the local conditions of, for instance, Natchez in 1878, should fail to originate that which the local conditions of towns adjacent to and encircling it did, as is claimed, readily and abundantly originate. There is no such difficulty in crediting, that the presence or absence of the disease depends primarily on the importation of its poison, and secondarily on the presence of such local conditions as may be necessary for its propagation. The chief obstacles to this belief are, the frequent inability to prove importation, and disbelief in the power of resistance and dormant vitality of the poison. Evidences of the presence of the poison having disappeared for weeks, months, or years, it is deemed improbable, even impossible by many, that the poison should still be present, only awaiting favorable local conditions for its reproduction. Hence, on reappearance of the disease, those, thus incredulous, deem it manifest that the poison must, in the absence of proof of its reimportation, have had a local origin. Now, it is important to remember, that this absence of proof is negative evidence, of which no amount can countervail one single instance, of positive proof; and that this absence of proof occurs most frequently in the largest and most frequently

infected cities, such as Havana, Vera Cruz and New Orleans. But, the larger a city, the greater and more complicated is its intercourse, and this condition necessarily increases the difficulty of determining the time when, and the mode by which, even large and familiar objects are imported or exported, much more of an invisible and inappreciable poison. Every inhabitant of a small village may easily know, when and how an unusual bunch of bananas was introduced, while, such a circumstance in a large city would be known to very few, and, if the fruit proved poisonous, would be probably confined to these few. Hence, the introduction of a disease-poison, as of yellow fever, into a small village, is generally more easily traced, though its physicians may have no experience in the disease, than in a large city however experienced its physicians. Though this seems a self-evident truth, none the less, many have been and continue to be misled by the fallacy, in a matter of this nature, that those who have had most experience in the disease were the best judges, and that their failure to prove importation deserves more consideration than the alleged proofs to the contrary of the inexperienced; however, evidence of the inexperienced, taken under most favorable conditions, is often entitled to far more weight, than the evidence of the most experienced, taken under unfavorable conditions. But, if all these objections to absence of proof be thrust aside as valueless, the conclusion arrived at, that a reimportation of poison is necessary to account for every reoccurrence of the disease, is not supported by our present knowledge of disease-poisons; for, as will now be shown, this knowledge fully justifies us in believing that, the poison of yellow fever possesses, like other disease-poisons, great powers of resistance to time, and to other destructive influences.

Prior to the consideration of this subject, as it concerns the disease-poisons, whether known or as yet unknown to consist of living organisms—some suggestive facts respecting organisms, which are not necessarily associated with disease, at least of man, will be mentioned.

The prolonged duration of the dormant vitality of seeds is well known, and is illustrated by the familiar and extreme

instance of the growth during this century of wheat obtained from an Egyptian mummy buried many hundreds of years ago.* Sir Henry Holland teaches that "there is reason to presume, upon various evidence, that the simpler and more minute the form of organization, the greater is the faculty of retaining life in a dormant state." He states, that since completely organized infusoria can be restored to life after long apparant extinction, their ova may be supposed even more retentive of life; and he refers to an instance, reported by Ehrenberg, to the effect, that he had obtained certain microscopic living organisms from dry earth, had laid them away in his writing desk, and at the end of four years had revived them by immersion in water. When an animal, as highly organized as is a bed-bug, can pass a year without food, Ehrenberg's statement demands very little from our credulity. It is a notable fact, that the persistence of life in the bacteria or germs which cause those contagious processes known as fermentation and putrefaction should depend in many on the absence (especially in those causing fermentation), in some on the presence, of air, thus giving rise to Pasteur's two classes of ærobic, and anerobic germs. Tyndall asserts that cold only benumbs bacteria, which even if frozen to 0° F, will revive at 40°. While heat kills them, none the less, the spores of some fungi can resist boiling water and caustic lime. Dallinger and Drysdale have demonstrated that, while living septic monads are killed by a heat of 140°, the spores of one variety—which are so minute that they cannot be seen by the highest powers of the microscope, except in mass,—are capable of germinating after being subjected to a heat of 300° for ten minutes. The "dry rot" fungi of decaying wood are well known; and, recent experiments have proved that, "the temperature at which dry rot proceeds most rapidly is 80° F., at 90° it is slower, at 100° slower still, and at from 110°-120° is generally arrested. Its progress is rapid at 50°, slow at 36°, and is arrested at 32°;

* The modes of distribution of disease-poisons are as interesting as, and more obscure than those of plants. On this subject, and on the dormant vitality of seeds, Darwin contributes this interesting fact. "Professor Newton sent me the leg of a red-legged partridge, which had been wounded and could not fly, with a ball of earth adhering to it weighing six and a half ounces. The earth had been kept for three years, but when broken, watered, and placed under a bell-glass, no less than eighty-two plants sprung from it."

but will return if the temperature is again raised to 50°," (T. A. Britton). Dr. Alf. Carpenter reports (British Medical Journal, October, 1879), that the germ of "potato-blight" lies long dormant in the soil, ready to propagate; their spores resist heat, cold, sunshine, rain, and, for a short time, even boiling water; their development is arrested by sunlight and dry winds, and necessitates moisture, absence of sunlight, and excess of carbonic acid. The poison of "swine plague," or "hog cholera," or "pneumo-enteritis" of the "pig" etc., losses nothing in potency by freezing, nor by preservation for one or two months closely packed in dry bran, "as proved by direct experiments; while there is good reason to believe that its power may be retained for a year or more. The poison in time looses its power, if kept in putrifying fluids or substances" (Report on Disease of swine, United States Department of Agriculture, 1879).

Reverting now to the disease-poisons of man, and first to those proved to be due to living organisms, few facts of interest in the present connection are found recorded, except as to that disease, which is unfortunately designated by many different names, among which are splenic fever, charbon, and anthrax. However, as to one other disease, tinea tonsurans, Aitken reports that it may be absent for years, from workhouses and other such favorite habitats, and then reappear without apparently any fresh importation.

Respecting splenic fever or charbon, and its germ, the bacillus anthracis, the following facts are reported. Dr. Alf. Carpenter states that this latent poison remained in one instance for three and a half years, localized in a stable. Professor Jno. K. Mitchell reports that, in hides this poison resists the process of tanning, prolonged boiling, and caustic lime. Bollinger (Ziemssen's Cyclop), asserts that, six months after the death of an animal by this disease, its hide, soaked in a pond, infected twenty sheep washed in this pond, a saddler who worked on the hide, and two horses wearing the harness made of it; he farther teaches, that while the freezing temperature renders this poison dormant and inert, as is the case in "other saprogenic bacteria," yet, that even if the temperature be reduced

to 0° F., the vitality of the poison is not destroyed, for it will revive if subjected to the requisite higher temperature. Ewart also asserts, as a result of his experiments, that the bacillus anthracis may be kept nearly at the freezing point, without being destroyed. Davaine has successfully inoculated the dried poison, 22 months old, of this disease. Pasteur has successfully inoculated the disease after two years cultivation of the original germs; and in 1879, he announced to the Academy of Medicine, Paris, "charbon, septicæmia, and chicken-cholera exist in the state of germs bottled in my laboratory. At will, during the last two years, for the two first, and for several months for the third, these germs, always ready, can be poured out for new inoculations and new deaths." He farther insisted, that very different conditions are required for the cultivation of different germs; for instance, that the "charbon-bacteria" would grow well in an infusion of beer-yeast, while the organisms of chicken-cholera would not grow in this, but best in chicken-soup.

Dr. J. S. Billings reports that Koch "found, that the bacteroidal forms of bacillus anthracis observed in the blood usually died in a few days, but that the spores retain their vitality for at least four years." Tyndall reports that, "Cohn permitted the dried blood to assume the form of dust, wetted this dust, allowed it to dry again, permitted it to remain for an indefinite time in the midst of putrefying matter, and subjected it to various other tests. After keeping the spore-charged blood, which had been treated in this fashion for four years, he inoculated a number of mice with it, and found its action as fatal as that of blood fresh from the veins of an animal suffering from splenic fever. There was no single escape from death after inoculation by this deadly contagium. Uncounted millions of these spores are developed in the body of every animal which has died of splenic fever, and every spore of these millions is competent to produce the disease." James Law, Professor of Veterinary Medicine in Cornell University, reported (p. 455, No. 4, V. 2, U. S. Nat'l Bd. of Health Bulletin, July 24th, 1880) as follows: "Cooking is a very insufficient protection, as the resting spores have been shown to survive a boil-

ing temperature, and, in particular cases, even 300° F., and a whole family were poisoned in Aberdeen, Scotland, by the beef that had been boiled for hours in broth. Further, and contrary to what holds with most other forms of virus, it is not essential that the skin should be broken in order to its absorption, and numerous instances can be adduced in which fatal results followed when it was deposited on the sound skin. Frost has no influence on its potency, and I have known a number of animals fatally infected by licking the frozen blood from a stone-boat, when the temperature was below zero. Nor is time nor putrefaction to be relied on. I have known cattle to perish promptly after lapping the liquids that leaked from a grave in which an infected carcass had been buried nearly a year before. I have further known pastures, on which the disease had been developed, for the first time in the memory of the inhabitants, maintain their infecting qualities for six years in succession, and to yield hay which continued to infect animals when fed to them at a distance from such pastures."*

In respect to this disease, there are two other alleged facts of interest to the student, who is seeking better to understand the nature of an unknown poison, through knowledge of the conduct of known poisons. The British Medical Journal, (June, 1879) reports that Davaine has found that, inoculating with the same septic fluid, the quantity necessary to kill a guinea-pig was 100 to 200 times more in the winter than in summer. Pasteur reports that birds are insusceptible to this poison, because their temperature is too high; and that he has proved this to be the cause, by immersing chickens (their normal temperature being 39° C.) in baths at 25° C. and at 30° C.—and then inoculating them, with the result that in the former case the chickens die in 36-48 hours, but survive in the bath at 30° C.

Attention is now called to similar facts referring to those disease-poisons which have not been proved to be living organisms: first, as to those poisons generally termed contagious;

* Prof. Law also asserts (p. 455) "that the cooking of tuberculous matter gives no guarantee of protection, as flesh is a poor conductor of heat, and tubercle that had been boiled from a quarter to half an hour had readily infected a number of animals that partook of it".

second, as to those which, though not contagious, are portable and communicable, and have been termed miasmatic–contagious poisons; and third, as to yellow fever.

Although the powers of resistance of the most familiar contagious poisons, as of small-pox, scarlatina, and measles are generally admitted, very few definite authentic statements as to such powers have been found.

Dr. R. O. Doremus (referring probably to the poison of erysipelas and puerperal fever), reports that, at one time, the walls of the old New York Hospital were scraped in vain to rid it of infectious disease-poison, for the very stones were impregnated; and that, in the numerous cases, where the wooden, plaster, brick, or stone walls of inhabited structures do become saturated, as it were, with the poison, there are only two remedies—either the heroic employment of the most potent chemical disinfectants, or to "break down the house, the stones of it, and the timber thereof, and carry them forth out of the city into an unclean place." The power of vaccine virus to be transmitted, without apparent loss, through hundreds of persons is well-known; it is also taught, that while this power is lost after exposure of this poison to a heat of about 140° F., yet that it is not injured by intense cold, and vaccine lymph has maintained its full power, for seven and even nine years, after preservation by the method of Dr. Husband, of Edinburgh—(pp. 17, 18, 25 of Jno. Simon's "Second Report, Public Health," London, 1860). Grisolle teaches, as to the poison of small-pox, that "this virus can, in certain conditions, preserve its power during several years—some say ten, twenty, even thirty years. In fact, cases are reported of grave-diggers being infected in exhuming, after such long intervals, the bodies of those who died with small pox. However, such facts should be accepted with the greatest reserve." The tenacity of the poison of scarlet fever is well known; it "clings long to rooms and houses, even for many months." Ziemssen's Cyclopedia reports instances of dormant vitality for two, five, fourteen, and eighteen months; and the destruction of the poison by a dry heat of 212° F.*

* The notable resemblance, in certain particulars in the conduct of the poison of scarlatina, a disease which physicians in tropical America have little experience, and of yel-

While many more persons are susceptible to the poison of measles than of scarlet fever; yet, it is admitted by all that the vitality and tenacity of the former is much less than of the latter. Dr. Home of Edinburgh, experimenting in 1758, found that "rags, soaked in blood, retained their infective properties only ten days." How long this poison may remain active in clothing and such objects is unknown. An interesting fact may be added, which has been reported, as to the poison of diphtheria (British Medical Journal, December, 1878). Dr. Nicati claims to have experimentally proved that this poison must have air, and that parts can be preserved from infection by protecting them from the free access of air.

The poisons of cholera, and of typhoid fever are the most important, and to yellow fever the most closely allied, of those disease-poisons, which are non-inoculable, yet transmissible, and are now classified as miasmatic-contagious poisons; being characterized, apparently, by the peculiarity that, while they come from a sick person, they yet require, outside of the body, favorable conditions for further change or development, before acquiring any infective poisonous power. * The resistance of these poisons will now be considered.

Dr. B. W. Richardson, the distinguished physiologist and experimenter, teaches "almost all the organic poisons [among

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low fever, deserve to be remembered. "Sometimes epidemics of scarlet fever are not coincident in neighboring localities connected by constant intercourse, a proof that in this question local conditions play an important part, and are frequently of determining influence." "It has often been noticed, that while scarlatina attacks one village with severity, a neighboring locality, in spite of the active intercourse between them, remains entirely free, or suffers very mildly from it; this fact has frequently been used as an argument against the indisputable contagiousness of scarlatina: we meet with it in the etiology of typhoid fever and cholera, and explain it by conditions of the subsoil, essentially independent of any human agency. The same explanation might serve in the case of scartatina."

Sparodic cases of scarlatina often occur, "appearing to have had no local or temporary connection whatsoever with others, which fact has given rise to the opinion that scarlatina could originate spontaneously through the agency of certain unknown atmospheric and telluric influences." (Observations on the origin and spread of epidemics of scarlatina continue to prove the paramount importance of personal intercourse. Though we cannot understand why this intercourse in a few, or even many cases, has not been followed by a marked spread of the poison, we, at the same time, cannot shut our eyes to the fact that in the majority of cases it is the only casual factor which we are able to demonstrate." "Scarlatina, to a greater degree than perhaps any other diesase, appears at one time in the form of a severe, at another in the form of a mild epidemic, and the same variation is noticed in the sporadic cases." (Extracts from the article on scarlatina in Ziemssen's Cyclop.)

* However probable, it has not yet been proved, that the poison of yellow fever is reproduced in the human body, and comes from the sick, some able thinkers believe that it is reproduced exclusively outside of the body, that a sick man is no more dangerous than a healthy one coming from an infected place, and that both are dangerous, for the same cause as, in the same way as, and to less extent than, bundles of old cloths, bedding, baggage, etc. If the former view be correct, yellow fever would resemble cholera and typhoid fever, but if the latter be true, then yellow fever would be the only known specific spreading disease thus characterized.

which yellow fever is specially named] are preservable by cold. We can keep them any length of time; in fact, I should think there is no limit to the preservation of them by extreme cold. We have seen this illustrated on a large scale in Northern capitals, where these poisons have been locked up for months by the cold. The poison of cholera in St. Petersburg has been locked up in the snow for a whole winter, and, on the solution of the snow, the poison has become active by being carried in the surrounding streams and taken into the drinking water." Dr. Vanderpoel refers to the poison of cholera having remained dormant, on one occasion in Russia, for two years; and Dr. Macnamara asserts, that if fresh cholera dejections be dried and protected from moisture, they retain their poisonous activity for years. It is a fact, familiar to all who have any experience or knowledge of cholera, that once introduced into a place it is prone to linger several successive years,—as in Cuba 4 years, 1833–1836, 6 years, 1850–1855, and 4 years, 1867–1870,—repeatedly declining, even disappearing for months, then reappearing with renewed violence. Such occurrences must be due either to repeated fresh importations, or to the vitality of the poison persisting through repeated stages of dormant vitality; attending circumstances favor the latter, more than the former view.

Similar facts are recorded as to the poison of typhoid fever. Dr. Rochester is not alone in reporting (pp. 134 Transactions American Medical Association, 1879) that he has observed several instances of this disease, which could be traced to no other source than ice, and, therefore, that this poison "is not destroyed or impaired by freezing." Dr. Cayley, in his recent admirable "Croonian Lectures" on this disease (British Medical Journal, March 1880), states that its poison, in a large running body of water, freely exposed to the air, is apparently soon rendered inert, while in close confined situations, it retains its activity for an indefinite time. He also reports two remarkable instances of the potency of the poison, after wonderful dilution, for instance: an epidemic, in 1872 at Furlenthal in the Jura mounains, was manifestly due to some of the water of a large stream, which had received typhoid stools, percolating many

thousands of feet under a mountain to the fountains of the adjacent village of Furlenthal; and, an epidemic, in 1879, at Caterham, England, was traced conclusively to a few splashings, from a bucket containing typhoid stools, into the immense reservoir of the water works. Dr. Cayley further cites instances wherein the poison remained dormant nine months and even two years. Liebermeister states that this poison has been proved to lie dormant at least nine months; and that, since in one instance six cases occurred at intervals in one house during eight years, it is probable that the poison can lie dormant from at least one to two years.

Many similar facts are recorded as to yellow fever, some of which will now be presented. Outbreaks of yellow fever on vessels, weeks and months after having touched at some habitat of the disease, or after having been otherwise subjected to infection, have occurred so frequently as to give rise to the belief in the spontaneous origin of yellow fever in ships. Unfortunately, for present purposes, these cases, for the most part, are not reported with sufficient precision respecting either dates, or other essential details. However, numerous cases are on record proving that the poison may remain dormant from two to three months. Repeatedly has "a ship epidemic, interrupted by a voyage into cold latitudes, as New Foundland and Cape Horn, reappeared two or three months after its interruption." The most recent alleged instance of this kind (except the instance of 58 days Dormany cited, chap. vii), occurred on the U. S. Steamer Plymouth, reported by its surgeon to have been "altogether a particularly clean ship," but the inner planking and the beams and knees were in many places badly decayed. The Plymouth coaled at St. Thomas (where there was yellow fever), October 21st to 25th, 1878; then visited, on the 25th, the adjacent island of Santa Cruz, where it was known that one death by yellow fever had occurred in October. From October 25th to November 7th seven persons on board were attacked with yellow fever, and there were no other cases. The Plymouth returned to the United States, and remained from November 30th, 1878, to March 15th, 1879, at the extreme northern harbors, first fo

Portsmouth, then of Boston. The Boston Medical Journal, of July 24th, 1879, reported "While in dock [at Boston] the Plymouth was fumigated three times, one hundred pounds of sulphur being used. Most, but not all, the stores were removed from the ship. The cold was such that ice formed and remained several days in most parts of the ship, but much of the time there was a fire, in a coal stove in the fire-room, for the use of the workmen." On March 15th, the Plymouth sailed for the West Indies; on the 19th, in consequence of a storm, "the hatches had to be battened down, and the damp berth-deck became very warm, a tropical condition prevailed." On March 21st, one of the crew, on the 22d another, sickened with yellow fever, these being the only cases; and the steamer, when at 27° 40′ north latitude, headed north. This instance tends to prove a dormant vitality of the poison of yellow fever during the four and a half months, November 7th, 1878, to March 21st, 1879. It also tends to prove great power of resistance to cold, perhaps also to sulphur fumes, at least under certain circumstances; and directs suspicion, by no means for the first time, to the "badly decayed" wood-work of the steamer, as the specially favoring circumstance. In connection with this, it is worth noticing that Dr. Heineman, of Vera Cruz, has recently called attention to the repeated introduction of yellow fever into vessels at Laguna, a maritime timber mart in Mexico, apparently by no other means than by the timber, floated to the vessel and taken on board by those who sickened without having visited the shore, or having come in contact, as was confidently believed, with any other infected things or persons. As is well known, wood is the favorite habitat of many fungi.

During the same years, 1878, 1879, there occurred on land a similar instance, as is believed, of dormant vitality. Memphis, having about 50,000 population, a large portion of whom fled, had about 17,600 cases of yellow fever in 1878; the last death was reported on December 12th. The winter was severe, one unusually heavy snow storm, as early as Christmas, fell to the depth of several inches. In 1879, Memphis suffered again severely, the first recognized case occurring July 6th, at a time when no cases could be found nearer than Havana, and no proof

could be obtained of a fresh importation. Hence, there was in this case evidence, and very good evidence, of dormant vitality for nearly seven months, December 12th, 1878, to July 6th, 1879. Added to many grossly insanitary conditions, Memphis had many streets paved or planked with badly decayed wood.

The reported cases of the occurrence of yellow fever in persons engaged in unpacking trunks containing the apparel of those who died with yellow fever, are very numerous, and deserved much more careful record than their reporters have, for the most part, given them. If more carefully detailed and bet-authenticated, these reported cases would have long since settled several disputed points of importance. It is worth premising, in respect to fomites in trunks, that "fungi, when lodged in trunks among filth and animal matter, find in darkness and dampness the fittest imaginable growing place;" a fact equally true of the holds of ships, and of the circumstances usually attending dirty clothes and bedding. Neglecting numerous instances which tend to prove shorter periods of dormant vitality, two, which refer to the longest period known to me, will be cited. Dr. C. M. Smith, of Franklin, now President of the Louisiana State Medical Society, reports one instance where, the opening of a trunk two years after the packing of the effects of a person dying with yellow fever, was followed by cases of yellow fever, under circumstances which rendered it as certain as failure of counterproof can render anything, that the cause of the fever came out of the trunk. Dr. Hulse, of Pensacola, Florida, reported the following instance: "In 1853, a Mr. Lane was attacked with yellow fever at Dr. Fisher's, in Milton (which is a few miles from Pensacola). His effects were packed in a trunk, which was locked, placed in a storehouse, and covered with old cloth sacks. In the summer of 1855, two years later, this trunk was sent from Milton to Brooklin, in Alabama, 40 to 45 miles North and it was opened in a house, in presence of several persons. Soon after, six of those living in this house sickened, and several died with black vomit." Though such instances, as these two, fall short of absolute scientific proof, they, none the less, justify in connection with proved facts, respecting like disease-poisons, a very strong suspicion, that the

poison of yellow fever may, under favorable circumstances, preserve its virulent power during at least two years of dormant vitality.

The following instance is interesting for its apparent illustration of unfavorable influences, other than time, which the poison can resist: Dr. Rochester reports (pp. 128-9, Trans. Am. Med. Assn., 1879), that "In September, 1856, an infected ship from Cuba was detained at the quarantine anchorage off Staten Island, N. Y. Several passengers had died, and some were ill on board. The garments and bedding were thrown overboard. Bay Ridge, a delightful suburban neighbor of Brooklyn, the seat of choice country residences, lies directly across the bay, distant about one mile from the anchorage mentioned. The wind and tide deposited a number of the garments that had been thrown away on the beach which terminated the lawn of Col. Chas. Prince, an old and respected resident. In taking his usual morning walk, he discovered the clothing and examined it with his cane, not otherwise handling it. He had no suspicion that it came from quarantine, and never saw it again. In four days he was taken ill, and died in a week from yellow fever. * * * The son and daughter, adults, and the Colonel's only children, were also attacked; the son died, and this was the commencement of an epidemic which destroyed many lives in a limited area, but which was stopped by enforced isolation, and by destruction of bedding and garments The clothing which produced all this evil had been saturated with salt water, and had been tossed by the waves for more than twenty-four hours before it made its fatal landing."

All the facts and considerations, thus far presented, tend to disprove the doctrine of the spontaneous origin of the poison of yellow fever, as well as of all other specific spreading disease-poisons; and, to encourage those, who concur with Aitken in condemning this doctrine as irrational, in crediting the apparently least credible instances of dormant vitality, a power proved to be possessed by disease-poisons, rather than in crediting the apparently most credible instances of de novo origin, a wondrous power unproved to be possessed by the poi-

son of any specific spreading disease. Before yielding faith to such an origin, science demands the most rigid and conclusive proofs, such as have never yet been presented.

There are other important properties of the poison of yellow fever which deserve consideration. Some of these will be briefly noticed. The portability of the disease, now taught by every recent medical text-book, is deemed too firmly established to require lengthy discussion. Such facts, as the introduction and spread of yellow fever for the first time, in the Island of Ascension in 1823; in the Island of Boa Vista in 1845; in St. Nazaire, France, in 1861; in Swansea, Wales, in 1865; in Madrid, Spain, in 1878;* together with the marked modern tendency of the disease to cling close to railroads, and to rivers navigable by steam, and the successful tracing out of the disease in armies and navies, are broad general facts, supported by so many minor proofs of the most positive character, that even the majority of those who credit the spontaneous origin of the disease, have been forced to admit that it is portable, that is, in some wise communicable, or, in other words, indirectly contagious. For, by some of the best modern writers, contagious is now used in an extremely wide sense, so as to include contact with any transmissible poison, whenever and however brought about, and not simply immediate contact with a poisoned person. Hence, much of present disagreement about the contagiousness of yellow fever is due to use of the same word in different senses.

Experience seems also to have induced general concurrence in the view that the disease can be imported by a healthy, as

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Since little is generally known of this last important incident, the following details deserve record:

Dr. Guichet, Surgeon in the French army, charged by the government with a special scientific mission in Spain, officially reported in 1879, the following facts: Madrid is 2214 feet above the sea. In 1878, a number of soldiers returned from Cuba, having been discharged because the insurrection had terminated. All of those at Madrid were apparently acclimated, certainly none came with yellow fever, nor had it while there. But a number of young people who lived side by side these soldiers and their clothing, trunks and baggage, were attacked. The epidemic was restricted to a very few squares adjacent to the crowded domicile of these soldiers; beginning September 15th, it was ended by October 15th; there were "twenty-five cases perfectly well known, but according to the most authoritative medical statements, there were more than fifty sick with about thirty-five deaths." Spanish physicians, though many in Madrid have served in Cuba, seem not to have doubted any more than did Dr. Guichet that the disease was yellow fever; and, the diagnostic and post mortem details confirm this view. The proofs seem good, and the opinion unanimous, that "the yellow fever at Madrid in 1878, was due to the importation of disease-germs in the clothing and baggage of healthy men recently returned from Cuba."

also by a sick person, from an infected place;* and that, on the whole, things or fomites are more dangerous than persons—some even contending that fomites alone are dangerous, persons not at all so. On this subject Heineman reports two facts of interest from Mexico. From an infected place, a lot of assorted goods were sent to a merchant in a distant inland town, first by healthy men in skiffs or boats to a healthy place, secondly by muleteers, who were never near either sick persons or infected places; and yet these muleteers, while transporting these goods, were nearly all struck down by yellow fever. In time of war, a band of native soldiers, almost unclad and with little or no baggage, came from a badly infected to an uninfected town without importing the disease; soon after, a band of European soldiers, well uniformed and having much baggage, came from the same infected to the same uninfected place, and yellow fever followed the visit of the latter.

Another curious property of the poison of yellow fever has been repeatedly noted. Very often the first set of cases has occurred, one, two, three weeks, sometimes longer, prior to the second set of cases, which begin, as it were, the resulting epidemic. If the poison be supposed to be an imported living organism, then the conclusion would be, as Prof. J. K. Mitchell long since indicated, that the first cases resulted directly from the imported poison, and that considerable time was often necessary for the growth of a second crop. The view that the poison is due to some extra-microscopic living organism peculiar to the tropics, would also explain why the poison produces such poor crops in temperate regions, and why its reproduction is arrested by cold. This view best explains also the frequently observed and unquestionable fact, that those who live and sleep nearest the ground suffer most with yellow fever.

*Sanitary inspectors, seeking to trace out the mode of origin of cases of yellow fever, should not neglect, when the mode of origin is doubtful and obscure, to investigate whether this cannot be traced through some of the concealed by-ways of illicit sexual intercourse. Surgeon Donnet, R. N., in his admirable official report of yellow fever at Jamaica, 1867, attributed the disease in the Aboukir to the intercourse of the crew with prostitutes, who neither had the disease, nor came from an infected place, but had recently herded on shore with healthy seamen from infected ships. Three other instances could be cited in which the mode of origin could not be traced, except through concealed facts relating to sexual intercourse.

Another property deserving attention, is the portability of the poison by the wind. Under ordinary circumstances, the distance must be very little indeed; a fact which does not prove that it may not be considerable under unusually favorable circumstances. Vera Cruz, Havana, New Orleans—all have places within ten miles or less, which have repeatedly escaped when those cities suffered severely with the disease. The Ft. Barrancas Barracks, Florida, is located 50 feet above the plain, is three stories high, and is within three quarters of a mile of the Pensacola Navy Yard; yet, in 1867, the soldiers secluded in this barracks, occupying as they did the third story, enjoyed complete immunity, while the disease prevailed severely at the Navy Yard (pp. 149, Circ. No. 1, U. S. Surg. Gen., 1867). Surgeon Lawson, Inspector General of Hospitals, reported in the British Medical Journal, May, 1879, that at Newcastle, Jamaica, in 1856, of "seven cantonments on the narrow crest of a mountain-spur, there were three sickly zones alternating with four healthy ones in a length of 800 yards," which would give a distance of only 343 feet between the cantonments. The Fort, San Juan de Ulua is opposite to Vera Cruz, the distance being less than three-quarters of a mile, and the anchorage-ground lies between them, yet others, beside Dr. Heinemann and the United States Consul, Dr. Trowbridge, assert, that even when yellow fever is prevailing in both places, and boats (often having sick and fomites on board) closely approach vessels in the frequent passage of these boats between the fort and city, these vessels are never thus infected. The vessels anchored in the harbor of every infected place constantly give proof that, habitually, the wind plays a very subordinate part in disseminating the poison; even in Havana, vessels anchored in the open harbor are rarely infected; yet it is impossible to anchor there further than 1500 feet from the shore, and it probably is never practicable to secure this distance from both the shore and an infected vessel.

The maritime sanitary authorities at Martinque indicate that from 40 to 65 feet to the windward of an infected vessel, is a safe distance for an uninfected vessel to anchor at; and Mélier's experience at St. Nazaire was to the same effect. Much more

evidence could be presented in proof of the short distance ordinarily requisite for safety, and still leave for answer the important question to what greatest distance may the wind, under the most favorable circumstances, transport the poison. Rejecting as unworthy of any faith, unfounded statements and vague suspicions to the effect that the poison may be conveyed 30 or even 50 miles, I have found the following apparently credible reports on the subject. Some have estimated the greatest distance to be 500 yards; a New York commission concluded that it was 300 yards; Dr. Vanderpoel states, but omits to give the proofs, that the poison has been distinctly traced over 1000 feet; while Mélier, who reports the most carefully observed instance on record—an instance in which it was proved, as fully as negative evidence is ever likely to prove, such a question, that the poison could not have been conveyed by other means—states that this greatest distance was 260 metres, or 853 feet. In any case, everything known on the subject tends to give assurance that winds are little to be dreaded as transporters of the poison, since their power is ordinarily restricted to very short distances, and at the most does not exceed a few hundred feet. Still further, the marked localization of the disease, which so frequently characterizes yellow fever, renders it impossible to believe that prevailing winds can have a predominating influence in spreading the poison.

It is evident that these considerations leave little reason for faith in "the epidemic-wave theory" of yellow fever, which faith would have us believe, for instance, that this poison could begin its aerial pilgrimage at Rio Janeiro, in the winter of 1849, 1850, and, extending gradually along the South American coast, through the Antilles, and across to the United States, reach Norfolk, Va., in 1855. Those thus believing must be hopelessly incredulous as to the influence of commercial intercourse.

The Color-Blind and Colored Signals.

By H. W. AUSTIN, M. D.,
U. S. Marine Hospital Service.

The defect known as Daltonism or color-blindness, has recently engaged the attention of the medical profession of this country, but we venture to say very few have devoted the time

or thought to which it is clearly entitled. The reason is obvious. Very rarely do physicians or others have any knowledge of those with this defect, as they who are color-blind are generally not aware of it.

This at first thought seems almost incomprehensible; but when we consider that the defect is congenital, that those thus affected, have from early childhood looked upon colors as something changeable, fickle, or a quality differing only with the taste of the observer, as persons differ in the merit of an oil painting; and also that they can see a few colors nearly as those with normal eyes see them, their ignorance of their defect is explained. This defect in the chromatic sense may appear a trivial matter, and undoubtedly does to many, inasmuch as those minus the sense of seeing certain colors are ignorant of the fact, and are not discomforted by it. But the more we study this subject and learn its true meaning, the exact condition of those with dichromic vision and its relation to certain vocations, the more important it appears to us.

It is by no means certain that the true physiological or anatomical nature of this affection is known. Several theories have been put forth by physicians and physicists in explanation of this visual anomaly, some of which have long since been exploded and others discredited. The theory now generally accepted as the most reasonable, and the one that best explains the nature of the affection, is that given by Thos. Young, relative to the primitive colors, and revived and applied by Helmholtz, called the Young-Helmholtz theory. This theory embraces the science of light and color perception, and is fully described by Professor Holmgren, in his work on color-blindness. Briefly stated, it recognizes in the optic nerve or retina three special senses, susceptible of impression by the undulations in ether, caused by all radiant bodies and bodies that reflect light. That there are only three cardinal colors, red, green and violet, and that all other colors and *nuances* are combinations of these. That one of these nerves of special color-sense is highly excited by the color red, while the other two are only slightly and in different degrees, producing the sensation red. That the second nerve is highly excited by the

color green, the other two slightly causing the sensation green. That the third nerve is highly excited by the color violet, the other two slightly producing the sensation violet. That color-blindness, red, green or violet, is due to the absence or paralysis of one of the nerves of color-sense. As each color stimulates all the nerves of color-perception in some degree, it will readily be seen that the absence or paralysis of one of these nerves will cause the person thus affected to be blind on one color, and the several others slightly changed or modified. That such is the fact can be demonstrated by simply examining any one who is color-blind.

Two or more persons who are red-blind will match and mismatch colors in like manner. Two or more persons green-blind will match and mismatch colors in like manner, and from these rules, to which there are rare exceptions, we are able to diagnose the kind of color-blindness. I can best illustrate the mistakes common to those of dichromic vision, by taking but a few cases of those I have examined and compare their classification of colors.

First person examined was given a sample of green worsted. The following are the colors and shades which were placed with it, for the same color: gray, brown, bright red, orange and yellow. Second person examined. Sample green, same as given the first. Mismatched with light red, orange, yellow, gray and brown. Third person examined. Sample green, same as given the others. Mismatched with red, orange, yellow, gray and brown. A sample of rose red or pink, was then given to each of the above persons to match. First person mismatched with blue and purple. Second person mismatched with blue and purple. Third person mismatched with blue, purple and gray. It will be seen in the three cases which I have given, the uniformity with which they mismatched colors. I have only compared a few cases, of quite a number of which I have a record, but they are nearly all alike. The cases noted are red-blind; those who are green-blind classify colors differently; likewise the violet-blind, of whom there are very few.

But it is not my intention to discuss the theory of color-

blindness, but only to point to a few facts concerning the nature of this affection, and its relation to accidents as a result from employing those with this defect, where it is of importance as a matter of public safety, to discriminate between colors. It is a well established fact, based upon the examination of hundreds of thousands, that about four per cent. of all male persons are color blind. It is generally known that different colored lights at night and flags by day, are used as signals in the running of trains on all railroads, and that all steam vessels carry red and green lights, that an approaching vessel may know their course. The imperative necessity that all railroad employees and pilots should at all times and under all circumstances be able to distinguish between different colored lights and flags, is apparent to any one who is familiar with the use made of these signals.

On railroads the red light is used as a signal of danger, and is frequently placed along the track, at bridges, broken rails, switches, etc. The red flag is likewise used in the day time. The green light signifies that the road is clear, etc.

It is a fair presumption that four per cent. of all railroad engineers and employees now employed throughout the United States are color-blind. Wherever railroad employees have been examined for this defect, and several thousands have been, on a few of the trunk lines, the number found that were color-blind was not less than four per cent. Is it possible for persons with dichromic vision to distinguish between red and green signals at all times and under all circumstances. If not, are there any who might properly be classed as color-blind, that could with certainty in every necessary instance distinguish between the red and green signals? These questions *pari passu* are the main ones to be determined, for upon them nearly all interest in the subject depends. If a color-blind railroad employee be asked if he can distinguish between the colored lights, he will invariably say he can. He believes what he says, and can hardly be convinced otherwise. What he says may be true, provided he has had some experience with the lights, and they are but a short distance from him. But how

does he distinguish between the red and green, if he is color-blind? Not by their color, but by their intensity or brightness, just as we, with normal eyes, know an electric from a gas light. One light is more intense than the other. The red light is the brightest and can be seen further than the green. Red glass transmits more light than green glass, and persons who are color-blind and have had to be governed by colored signals, quickly learn this fact.

In regard to the colored lights used as signals, there are no uniform shades prescribed. Some are light green and some are dark, and the same can be said of the red. But even when the greatest precaution is used in selecting the colored glass, the colored light transmitted through it will not always appear of the same shade, but is modified by the state of the atmosphere and distance. A dark green lantern a half a mile distant appears light green. A green light shows its color better by starlight, and in a fog it partly loses its color, approaching a white light. If the red glass becomes a little smoked, the wick a little low, or the shade of the red dark, the green light may appear the brightest. In fact, the signal lights used on railroads and steam vessels appear in the different shades of red and green, and must be distinguished in all. I believe it will readily be seen that very little dependence can be placed on the manner of distinguishing between colored lights by their intensity or brightness.

I recently examined a person green-blind. He was first shown at *short* distance, and together, a red and green signal light, both of medium shade. He could readily distinguish between the two, and called them by their names properly a number of times. I then covered the red light with two thicknesses of thin white muslin, and the green with but one. The colors and lights were distinctly visible, but he would mistake the red for the green every time they were shown him. I then asked him how he could tell the difference between them when uncovered; he readily answered the red is the brightest. I have seen but one case of total color-blindness, and believe they are very rare. This man mismatched every color and

shade with green, except canary yellow (very light shade), white and black. Otherwise than this defect, his sight is good.

The color-blind can not improve their color sense by any known method. In regard to the method of detecting this defect, too much care can not be exercised. Of the many different methods that have been advocated and employed, Professor Holmgren's is the simplest, most practical and the one generally adopted. It simply consists in allowing the person to be examined, to select from a pile of Berlin worsteds of all colors and shades, such colors and shades as appear to his eyes to resemble in color a skein that is placed apart from the rest. Rules are given for selecting the colors, the manner in which they should be employed, and how the diagnosis can be made. But I only refer to this, to show that the examinations should be conducted by some known and tried method, to be of any value. These examinations should always be made by a physician, and should never be entrusted to any one who is not thoroughly acquainted with the subject.

My object has been to show that accidents involving life and property are likely to occur on all railroads and steam vessels, while color-blind men are employed. I believe the danger from this visual defect is greater on railroads than at sea, and there is little doubt that many of the terrible disasters of the past by sea and land, in which the causes were not ascertained, were the result of mistakes by the color-blind. While colors are used as signals, the whole *personnel* of all roads should be examined by the road surgeon or some physician appointed for that purpose, and those who are found color-blind or incompletely so, should be dismissed from the service at once. Such precaution, although it may work hardship to a few, is but justice to the travelling public and to the best interest of the roads. Wherever this subject has been fairly presented to the railroad authorities, prompt and efficient measures have been taken to ascertain if any of their employees were color-blind, and to preclude all persons with this defect from entering their service.

Persistent Priapism.

This disease which is very rare, has, within the last few years, almost invariably been found associated with a form of leucocythemia. In the case reported by Dr. Maguire, no examination of the blood was made, and therefore it is impossible to demonstrate the cause. The case, however, is so interesting that, although the report is in a private letter addressed to me, I think it right that the medical public should be aware of it, and therefore hand the correspondence over to the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, for publication.

I. L. CRAWCOUR, M. D.

JEANNERETTE, June 15th, 1880.

MY DEAR CRAWCOUR :

Yesterday I visited my patient with priapism, and found him cured. The affection in its acute stage lasted six weeks, improvement taking place on the seventh week. As I observed to you before, the patient Louis F., is a man of 56 years of age, a quadroon free by birth, belonging to an excellent and well-to-do free mulatto family. He is a powerful man, 6 feet high, no surplus flesh, and a model rider and cattle driver. He has a large family and is sober, frugal and temperate in every respect. He is free from leucocythemia or anemia, and the only trouble he has ever had, was an attack of sciatica two years ago, which gave way to ordinary treatment, and he has had occasional rheumatic twitches since, viz: one during his present attack, which came on the second day that I had ordered him to exercise, the plantar surface was affected. A medical confrere who was present, thought that the hyperesthesia of the glans had disappeared then, but I could see nothing like a metastasis. The pain in the foot lasted only 24 hours, and has not returned. There is no history of syphilis in this case. During the whole attack the patient's health has been perfect. I questioned him on sexual desire and capacity. He stated they were normal, and that sexual intercourse afforded him as much satisfaction

as ever, but that he was not urged toward this passion more at this time than any other.

I suppose you remember that the patient was taken sick away from home, some fifty miles, on a visit to his sister. He made the trip leisurely in two days in a buggy, and without any fatigue or previous indisposition, he woke up on the morning of the 11th April, with an erection. After micturition he thought this condition would change, but it did not, and the pain increasing, he sent for a neighborhood physician, who prescribed an opiate and a blister in the lumbar region. He was placed on a mattrass in a hack, a hoop cradle over him, to protect his parts from the clothing and finally reached home. He was carefully examined for stricture, prostatic enlargement, disease of rectum, ascarides, etc., and urine carefully analysed and every thing found. The blister was made to suppurate, and leeches placed in the perineum, which bled abundantly. Opiates and quinine were freely given, after a thorough purgation and no relief.

The patient was then seen by me for the first time, about the eighth day of his attack, having been up to that time, under the care of Dr. Colgin, of New Iberia. We then tried electricity, having one electrode sometimes the P. or the N. in the rectum and the other on the spine or abdomen. He seemed to suffer great pain from it. Giving him time to rest, chloroform was carried to its full effect. No result. Three 15 drop injections of Magendies solution of morphine, with one grain of atropia, were given deep in the levator ani muscle, in the space of one hour, and the only result was some drowsiness and relief of pain at the glans.

He was then given 10 grain doses every 2 hours, of the monobromide of camphor, and a suppository of iodoform and belladonna introduced in the rectum. His parts were smeared with an ointment composed of equal parts of mercur. oint. and extract of belladonna. This was kept up many days, only substituting the bromides of potassium and ammonium for the camphor. I forgot to mention applications of ice, which caused intense pain and could not be borne, his great relief being

warm hip baths, which he would take often, and morphine at night. Applications of aconite were tried, but poultices made of the fresh leaves and stems of the datura stramonium, with papour baths of the same proved most soothing. Iodide of potash was carried on to iodism. At no time of the disease was there any increase in pulse or temperature. Not having my notes before me and writing from memory, I may have omitted some remedial measures used, but I can state that nothing that was given made any impression on the disease, and that the only relief from pain was due to the administration of morphine and belladodna in iodoform suppositories and the poultices of stramonium and warm baths. There is no doubt in my mind, that the disease is self-limited and *essential*, that is, not coinciding with appreciable anatomical changes.

By the fifth week the patient passed into the hands of a colored 'traiteur' a process in the section of country almost ordinary in any form of chronic disease, and the affection subsiding whilst the fellow was attending, he received all the glory of the cure. I explained matters to the patient with the report of Dr. Peabody of the New York hospital in hand, but don't know what amount of conviction it carried. It is difficult to erase superstition in certain minds, and Montague has truly said, that: "L'esprit de l'homme est de glace pour la vérité et de feu pour le mensonge."

I believe I have given you all the important particulars of the case. You will draw your own conclusions.

I could not use the veratrum that you suggested; the patient at the time was going about with a malakoff and gown, under his shady tree;—he has now resumed his breeches and *other rights*.

As ever faithfully, etc.,

A. MAGUIRE.

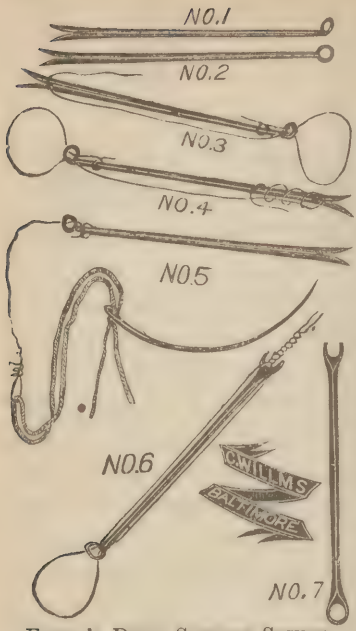
Current Medical Literature.

A DEVICE TO FACILITATE THE REMOVAL OF DEEP WIRE SUTURES IN THE OPERATION FOR RUPTURED PERINEUM.

By AUG. F. ERICH, M. D., Professor of the Diseases of Women, College of Physicians and Surgeons, Baltimore.

Every surgeon who has operated for extensive rupture of the perineum must have felt that the removal of the wire sutures is the most unsatisfactory part of the operation. The loop of the wire, as well as a portion of the twisted part, being deeply buried in the swollen tissues, is entirely out of sight. Seizing the protruding end of the twisted wires the operator gropes with the point of the scissors in the supposed direction of the loop, and cuts whenever he thinks he has reached it. It often happens that he has to cut several times before he succeeds in including the wire between the blades. It the twisted portion should be a little bent, it would be almost impossible to avoid cutting it off near the loop, in which case a complete ring of wire would remain deeply imbedded in the tissues. The difficulty of the removal of sutures appled to the recto-vaginal septum, especially upon its rectal surface, is so great that many operators use cat gut and leave it to be absorbed. But, few surgeons who have had much experience with cat gut sutures would be willing to rely on them in these operations. Drs. Cutter and Bache Emmett have invented instruments to overcome the difficulties experienced with deep wire sutures in the operation for ruptured perineum. While they greatly facilitate the removal of the perineal sutures, they are of little use in removing those in the recto-vaginal septum.

The accompanying wood cut shows a little device by means of which I think I have succeeded in overcoming the whole difficulty. By its use the junction of the wire is removed so far from the surface of the tissues as to be always within easy view.



ERICH'S DEEP SUTURE STYLET.

The stylet is of steel and 1½ inches long; at one end is an eyelet, and at the other a small rounded fork. (See cut No. 7.) Both ends of the wire are passed through the eyelet after they emerge from the tissues; carried over the fork at the other end, and twisted until the necessary tension is secured [No. 6]. In some the eyelet is parallel to the shaft, and in the others at right angles to it. In some cases the sutures are most easily secured by the stylet figured in No. 1 and 2. Here one end of the wire, after passing through the eyelet is secured to the shaft by a single twist, [No. 5], and the other after being tightened by traction with a gentle pendulum motion, and fastened temporarily by passing over the clamping fork at the upper end of the shaft [No. 3]. It can then be permanently secured by a few turns around the shaft [See No. 4]. After the sutures are all secured the stylets are brought together and a piece of gum tubing slipped over them.

The ease with which sutures applied in this manner can be removed, must be manifest at the first glance. In the kind first described [No. 6 and 7] one wire is to be cut below the twist, and then seizing the long end of the wire and the stylet with a forceps, gentle traction will bring both away. In the second variety [Nos. 1 and 4], a little traction made upon the end of the wire wrapped around the upper end of the stylet, draws it out of the clamp, when it is cut off close to the tissues and the stylet is removed by gently drawing upon the stylet to the foot of which the other end of the wire is attached.

Mr. Willms makes these little instruments very neatly.

As the principle of the application of these sutures differs considerably from that in general use, the operator is advised to acquire the necessary dexterity in using them by a little preliminary practice upon a piece of soft leather fastened to a table.—*Maryland Medical Journal*, Sept. 1.

No. 94 South Broadway.

TRANSLATIONS.

By DR. SIMON G. GILL, New Orleans, La.

AMMONIO-SULPHATE OF COPPER IN TIC DOULOUREUX.

Doctor Fereol of Lariboisiere, has used the above old and long forgotten remedy in four cases of tic douloureux, with results so satisfactory, that he strongly recommends its re-introduction. He prefers the following formula:

℞. Cupric-ammonio-sulphat.	grs.	1½-2 ;
Syr.		℥i ;
Aq.		℥iii. M.

This quantity is to be taken during the 24 hours, preferably after vegetable food. If the pain continue, increase the dose. In one case as much as nine grains were used during the day, giving rise however, to gastro intestinal disturbance; even the administration of the usual doses will cause fetor ex ore and a metallic taste, nevertheless continue with 1½ gr. daily for 12 to 14 days.—*Medical Times and Gazette—Norwegian Journal of Medicine.*

POTASSIUM BROMIDE IN VOMITING DURING PREGNANCY.

Professor N. Friedreich extols this remedy, having tested its efficacy in four cases, all primiparæ, and all much reduced in strength and flesh, and in quite dangerous condition. Already after the first doses, 15 grs. potassium bromide to ½ oz. water, thrice a day, the patients were relieved and that permanently.

Professor Friedreich even asserts that we in the potassium bromide possess a specific against this troublesome disorder.—*Norwegian Medical Journal.*

THE ABORTIVE TREATMENT OF ERYSIPELAS.

Several times during the last few years have I succeeded in checking facial erysipelas, by painting a broad ring of collodion around the attacked part. Although perhaps other physicians may have used this treatment, I have nevertheless been unable to find any mention of it, nor have those of my confreres with whom I have spoken in regard thereto, been acquainted with this mode of treatment.

As it undoubtedly is quite desirable to be able to check a facial erysipelas, at least a very disagreeable, even if not dangerous disease, and having of late repeatedly used the collodion treatment in my own practice, as well as received reports from my colleague, Doctor Christie, who also has employed it successfully, I make mention of it here, in order that other physicians may give it a trial in their practice.

I consider the treatment theoretically correct, if, as is uni-

versally admitted, erysipelas is caused by an infectious material, whether bacteria or some substance setting up a chemical process* extending through the loose subcutaneous cellular tissue, and we can prevent its extension by the application of collodion.

I have only seen disappointment from the former way of using collodion, that is by penciling it over the whole diseased surface, while a ring around the attacked parts puts a check to the extension of the poison. I have repeatedly seen how the morbid process has extended to the obstruction, fought against it, but without being able to overcome it; I have also seen it break through a weak place in the ring, but compelled to stop at a new ring drawn around it. I will relate a few cases. The last one occurred in January this year. The erysipelas commenced as usual from the nose, extending to the cheeks on both sides with considerable fever, foul tongue and general malaise. The collodion ring was drawn around the diseased parts, and the following day the erysipelas was checked, except a small place on the right cheek, where it had broken through the ring; here a new ring was formed around it, on the third day the erysipelas was completely checked, and the tongue was clean and moist again.

That I, in this case, had to deal with a severe attack, was proved by the fact that the patient still for several days suffered from debility, and was unable to attend to his business. It may be said it would have stopped by itself, as occasionally happens with erysipelas commencing at the nose. In reply, I will relate Dr. Christie's case. It happened about the same time as my own. He writes as follows:

"I have just had occasion to bring in'o practice your method of treating erysipelas by penciling a ring of collodion around the periphery of the place attacked. The erysipelas commenced near the nape of the neck, and rather rapidly spread over both ears, forehead and cheeks, preserving a perfectly symmetrical figure. I drew around the attacked parts, about a quarter of an inch from its circumference, a rather broad circle of collodion. The following day the erysipelatous blush had reached the collodion at nearly every point, still, it nowhere crossed this boundary, although it ultimately reached it everywhere. In some places, particularly on the right cheek, the swollen erysipelatous skin actually rolled out on the collodion ring. During the following days the blush gradually faded away. I believe the collodion prevented the further spread of the disease, as the boundary line was not passed at any point, and on the right cheek it looked as if the poison was held in check like a stream dammed back."

I am unable to say if this treatment will prove equally effective in checking erysipelas in other situations. The face

* (It has been demonstrated, that the skin at the margin of the inflammatory redness n erysipelas is full of micrococci.—TRANSLATOR'S NOTE.)

offers the advantage that the compression is very firm against the closely underlying bones. Some years ago I failed in arresting an erysipelas on the leg; it commenced after the amputation of the great toe, but I am sure I did not then use a sufficient quantity of collodion. I had some fear of causing gangrene by compressing the whole circumference of the limb.

In conclusion, I will request to make the collodion ring both broad and thick, being particularly careful where there is hair or beard.

DR. A. G. NORREGAARD,
in Norwegian Journal of Medicine.

THE TREATMENT OF DROPSY AND URÆMIC CONVULSIONS DURING PREGNANCY.

By PROF. LEHMANN, Amsterdam.

K. O., æt. 26, was admitted to the hospital November 21st, 1879, unconscious and in convulsions. Her husband states that she has been ailing during the whole time of her second pregnancy, and occasionally feverish; her feet have been œdematous for several months; later, general dropsy and diminished excretion of urine. At 5 o'clock, A. M., she had a convulsion without any prodroma; again, half an hour later, another very severe seizure. At the time of admission to the hospital, she was, as stated, unconscious, comatose, breathing stertorous, features swollen and cyanosed, pupils contracted and a bloody froth around her mouth; the belly very large, vulva and limbs swollen; no fœtal sound could be detected; the os dilated to the size of a silver 25 cent piece, head presenting. Temperature 102.2°, and labor pains were insignificant. Fifteen minutes after admission, she had a third severe convulsion, lasting about thirty seconds, followed by many more, occurring with but short intervals. A small quantity of urine was removed by the catheter, color dark brown, reaction acid, sp. g. 1.013; it contained an unusual quantity of albumen, but no sugar.

At a later examination, numerous granular casts and fatty epithelial cells were found. An enema was first given and then a subcutaneous injection of a two per cent. solution of muriate of pilocarpine. This last injection was repeated two hours afterwards, the whole quantity used amounting to 65 minims (or about 1¼ gr. pilocarpine). Already five minutes after the first injection the patient was perspiring freely, with abundant secretion of saliva, but the convulsions still recurred with unabated violence and frequency. At half past 7 o'clock, shortly after the second hypodermic injection, the intermissions seemed to become somewhat longer. The os was yet not larger than a silver half-dollar, the general condition commenced growing worse, the coma continuing, the pulse very rapid and barely perceptible, the temperature lowered down to 100.4°, the skin, particularly on the arms, covered with a profuse perspiration, a quantity of sanguineous slime oozing from

mouth and nostrils, labored and stertorous breathing, face and hands pale and clammy. Considering the imminent danger, and fearing she might die undelivered, as labor pains were absent, instrumental delivery was resorted to successfully, the child was easily delivered in a few minutes, but dead, and another fœtus could be felt in the womb. About ten minutes after this delivery she had another severe convulsion lasting 45 seconds, and the second fœtus was delivered, also dead. The placenta was removed about ten minutes afterwards, the womb contracting firmly. The patient was in nearly a collapsed condition, temperature 98.6°. Sulphuric ether was injected into the arm and this injection repeated two hours afterwards. At midnight she still remained comatose, with stertorous breathing. The skin, however, was everywhere covered with profuse warm perspiration, pulse stronger, temperature 99.5°, no convulsions since delivery. The following morning found the patient still comatose, respirations less stertorous, pulse rapid and weak, skin warm and perspiring, temperature 98.6°. A large quantity of urine was removed with the catheter; no change in its composition from the preceding day; uterus well contracted, not over sensitive to pressure, lochia normal. Only towards evening did she commence to show signs of returning consciousness. She drank a small quantity of milk and passed the night quietly. The following morning she was in the full enjoyment of her mental faculties, passed a large quantity of light colored urine still containing an abundance of albumen, and the odematous swellings had decreased considerably. Twelve days after admittance she left her bed—urine non-albuminous.

M. S., æt. 27, second pregnancy, was admitted September 22nd, 1879, at 7, P. M., unconscious, after repeated severe convulsions. Her first pregnancy ended by abortion in the third month of gestation. Three months ago, while apparently in good health, dropsical swellings appeared, first in her feet, thence spreading up her limbs, abdomen, face and arms. Although she had, up to the present time, violent desire to void her urine, it had been but scantily excreted after vomiting several times. She was first seized with convulsions at 6, A. M.; they recurred with but short intervals and she became unconscious. Her whole body was œdematous, particularly her face. Coma, breathing stertorous, pulse 140: temperat..re 105°; pupils contracted; no fœtal sound could be heard. The external os would barely admit the finger, head presenting, apparently not at full term, fœtus probably dead, no labor pains, her features cyanosed, sanguineous froth around her mouth, convulsions very violent and recurring with an interval of 8 to 10 minutes. From 7 to 8½, P. M., she had nine seizures of unusual severity and duration. Very little urine could be obtained by the catheter; it was of acid reaction and loaded with albumen and casts. Prognosis very unfavorable; death before delivery probable.

This case was treated exclusively with pilocarpine; no other remedy was used. At half-past eight o'clock an injection of 32 minims of a 2 per cent. solution of pilocarpine was given hypodermically on the anterior surface of the left thigh. Five minutes afterwards the whole surface of body as well as of limbs was covered with profuse perspiration; saliva and slime flowing from mouth and nostrils; pulse 156. She was again seized with another convulsion, followed with but short intervals by many more. Half-past ten o'clock another similar injection was given, causing an unusually profuse perspiration of her whole body, so abundant that it continually ran down her forehead and face guttatim, perfectly bathing her arms and limbs; nevertheless the seizures would recur, but not as severe as before, while the intervals were longer. The respiration however became more oppressed. At half-past eleven o'clock, she was lying deeply comatose, her arms bathed in cold, clammy perspiration, features shrunken, thready and very rapid pulse, temperature in vagina 105°. She appeared to be dying. No labor pains. At half-past one o'clock a third hypodermic injection was given, and 15 minutes afterwards the perspiration was somewhat warmer, and she became quieter, so that only occasionally light convulsions of her arms could be detected. At half-past seven o'clock on the following morning she was found in labor pains, although still unconscious. By examination it was seen that the head was born and the body came shortly afterwards. The placenta followed immediately, and the womb contracted well. The fœtus was still-born, the skin peeling off in different places. It had nearly reached full term.

Eleven o'clock, temperature 100.4°, pulse 100 and stronger, skin covered with warm perspiration, patient still comatose, but breathing less stertorously, no convulsons. At 8 o'clock p.m., slight signs of returning consciousness, copious excretion of urine, temperature 101°. After passing the night quietly she woke the next morning perfectly conscious, temperature 99°. The swelling was considerably diminished and had completely disappeared 5 days afterwards, although the urine at that time still contained a trace of albumen but no casts.

The author considers both cases as results of uræmic poisoning, contingent upon parenchymatous nephritis, which he is disposed to believe had become developed during pregnancy. The treatment with pilocarpine he considers to have been very essential as a diaphoretic and diuretic agent, while he expresses doubt about its action as an oxytocic. He also mentions having employed the pilocarpine in six primiparous cases, as well as in two multiparæ between the sixth and the ninth month of gestation, all suffering from dropsical effusions consequent upon chronic parenchymatous nephritis with diminished excretion of urine, containing cylindrical casts and a very large quantity of albumen. He used two injections of thirty-two minims of a two per cent. solution twice a day, and in

nearly all cases did he succeed in completely curing the patient after using five injections within from 8 to 14 days. Three women gave birth to dead foeti of 6 to 7 months gestation, from 6 to 8 days after the last injection. One was admitted to the hospital unconscious, after having aborted in the seventh month of her pregnancy during violent convulsions. The remaining four cases went to full term and bore living children.

The usual effect of pilocarpine is first to cause a general warmth of the whole body, followed a few minutes afterwards by increased secretion of saliva; then the perspiration would commence, first on the forehead, breast and limbs, sometimes very profuse, so that it would flow drop after drop, frequently with an increase of the secretion of tears. The unpleasant consequences of the injections consisted in sickness of the stomach, vomiting, rarely dizziness and headache, and only once, 15 minutes after the injection, irregular action of the heart. It even ceased to beat for a moment, the features became cyanosed, and the pulse slow and intermittent. These symptoms passed away, however, as suddenly as they came. This patient suffered from mitral insufficiency with hypertrophy of the right ventricle. After the lapse of six to eight hours all these symptoms would usually disappear. Urine would be excreted freely, and the bowels move repeatedly. Occasionally diarrhoea would supervene. The albumen and casts would frequently disappear in four to five days.—*Holland Journal of Medicine.—Norw. Med. Jour.*

FERRUM DIALYSATUM, ITS COMPOSITION AND QUALITIES.

According to Personne (*Jour. de Pharm. et de Chir.*,) ferrum dialysetum is not a pure oxide of iron, but a modification, which distinguishes itself from it by its insolubility in acids. Ferrum dialysatum was discovered twenty-five years ago in Pelouze's laboratory and was recommended on account of its but slightly astringent taste. Graham demonstrated that ferrum dialysatum is a colloid substance. By experiments it was proved that the preparation is entirely insoluble in the gastric juice and consequently inefficacious as a medicament.—*Centralblat f. kl. M.—Ugeskr. f. L.*

THYMOL USED IN COMBUSTIONS,

Fuller (*Deutch. Med. Wochenshr.*,) publishes a series of observations, showing that thymol may be employed successfully in the treatment of wounds, and he recommends it especially in such cases where carbolic acid is not well born. Excellent results were also obtained in combustions of considerable extent. The author used to commence treatment giving a warm bath and washing the burned parts and their surroundings with a solution of

thymol (1 to 1000) and employing a spray charged with thymol; the blisters he spared. The patients were then put to bed in such a manner that the burned parts as much as feasible were not exposed to pressure. Finally the burned parts were coated with a solution of thymol in linseed oil (1 to 100) applied with a soft brush, in the beginning every 10 minutes, later more seldom. The thymolic oil had a striking sedative action, and the patients themselves asked for the coating, when the oil dried and the pains returned. The content of the blisters was usually absorbed; when it turned turbid, the blisters were opened and covered with the thymolic oil in the same way at the other affected parts.

By this treatment there was formed a cover composed of epidermis, the secretion and thymolic oil, which dropped off when the wound had healed. The scars were smooth and elastic, presenting protuberances of the size of the head of a pin, corresponding to the openings of the glands. The fever was in such patients usually not considerable and did not produce delirium or digestive trouble. The healing process lasted 3 to 4 weeks; the mortality was low, merely 2 dying out of 30 patients. The author does not give any statement of the extent of the lesions in the single cases.—*Wiener med. Wochenschr.*—*Ugeskr f. Læger.*

CHIO TURPENTINE.

The following letter is taken from the *London Times*, and is republished here in the hope that it may cause a change in the great demand for Chio turpentine, which the druggists cannot satisfy at present, and the genuineness of which they cannot warrant at all:

CHIO TURPENTINE IN CANCER.

To the editor of the Times:

SIR—As the treatment of cancer by Chio turpentine during the last few weeks has been a subject of great public interest, I send you our experience of its administration at this hospital, where it has been extensively used in a variety of cancer cases, but up to the present, I am sorry to say, without benefit in any instance. As far as time will allow us to judge, the opinion of myself and colleagues is that the Chio turpentine does not possess the power of either curing or arresting cancer.

We are still using it in a few cases in the faint hope that further experience may lead us to take a more favorable view of its action.

I am, sir, yours obediently,

ALEX. MARSDEN, M. D.

Senior Surgeon to the Cancer Hospital, etc

Cancer Hospital, Brompton, June 3d, 1880.

(*Ugeskr. f. Læger.*)

In reporting the above, we wish sincerely that the Chio turpentine for good may have gone to meet its sister-remedy: Benzoate of Soda, deceased already some time ago after an equally brilliant but short-lived career and that both these agents will spare us a resurrection. *Requiescat in pace!*—(Rep.)

THE AMERICAN ASSOCIATION OF MEDICAL COLLEGES.

An examination of the official report of the fourth annual meeting of the American Medical College Association reveals an apparently anomalous state in the affairs of this organization. There are in the report confident assertions of the prosperity of the Association, but there are, on the other hand, certain facts stated which do not appear so promising. It will be seen from our abstract of the report in another column that the membership has increased in the past year from twenty-nine to thirty-one. So that the Association now embraces one-half of the colleges of the United States. It claims to have secured progress as regards medical education in seven different directions, and the claims are to some extent just. The reports of the special committees are independent in tone, and show a thorough appreciation of the evils that need remedying. And, finally, the Association has had the courage to take the step of insisting upon three full courses of lectures as a requisite for graduation.

But in spite of all this evidence of earnest endeavor after reform, we find that none of the largest medical colleges are working with the Association. Not one of the colleges of Philadelphia, New York or Boston, were represented at the meeting, except the Jefferson Medical College, and its delegate failed to vote for the resolution requiring a three-term course. The college of Physicians and Surgeons of this city, and the Bellevue Hospital Medical College, and the Vermont University Medical College, withdrew from the Association altogether. It is composed, therefore, now, for the most part, of the smaller medical colleges scattered throughout the west and south.

This disaffection of the Eastern colleges has, we fear, an unfortunate significance. If we interpret it rightly, it means that the Association can do them no good and that they do not have faith in the possibility of securing any great reforms in medical education through its influence. There certainly is some reason for looking at the matter in this light. The Association is composed largely of colleges which really can not subscribe to certain most desirable measures without ceasing to exist. One of these reforms—the one perhaps of least importance—is that of raising the lecture-fees. An attempt to make a rule on this point at the last meeting failed utterly. There is a very sharp competition among some colleges, and one form which this takes is the practice of underbidding each

other in the matter of fees. This practice, which is very demoralizing, the Association cannot stop. Another reform which is greatly needed is the insisting that a medical college should furnish a certain amount of clinical instruction. But there are a good many country colleges, where a rule enforcing even a small minimum could not be carried out.

The fact is, therefore, that a high minimum of requirements for graduation—a minimum embracing all points desirable to secure a thorough medical training—can never be applied to all American colleges, and can never be adopted by the College Association without a fatal loss of membership. A minimum that would, perhaps, elevate and benefit small colleges would be inadequate for the institutions of the great cities.

It is with great regret that we express this doubt in the future possibilities of the American Medical College Association. It has certainly done some good work, but, under its present methods, it has, we fear, done nearly all that it can. We see no way out of the difficulty, except by openly acknowledging the facts that exist, and by devising, if possible, some new plan for surmounting them. It seems very much as though the only possible solution will be in adopting two standards of minimum requisites for graduation. This would not be at all inappropriate to our medical institutions. We have two classes of colleges, the one in which didactic and clinical instruction are united in equal degrees of prominence, and the other in which the teaching is almost entirely didactic. The latter class embraces institutions which, though small, are often very useful. The most they can do, however, in the way of reform, will be to lengthen their courses, elevate the standard of their examinations, and increase the amount of didactic instruction. A general minimum of requisites for graduation, which would apply to this class, would not be sufficient for the large colleges; hence the propriety of a double standard. The country colleges should accept the fact that their function in medical education is a limited one, and they should be content with the position of a lower grade college. It is not a thing about which there could be any hesitation among thoroughly honest and disinterested men. It is almost a crime to graduate a medical student without giving him practical clinical teaching. We commend the matter to the attention of the Medical College Association, with the earnest hope that some measure in the direction indicated may be devised and eventually carried out.—*Medical Record*, August 14.

SUICIDE AND HOT WEATHER.

The vital statistics of Philadelphia show that during the past hot weather twenty-four persons have committed suicide. This fact has suggested the query whether hot weather has any causative relation to the increase in the cases of *felo de se*. The statistics of European countries, recently collected and

studied by a writer in *Blackwood's Magazine*, show that it has such relation very decidedly. Some interesting facts are presented in discussing the subject. It is not in cold or wet, but in fine weather that Europeans kill themselves the most. The returns indicate with glaring distinctness, says the writer referred to, that spring and summer are everywhere the great suicidal periods; that November is about the most innocent month in the year; and that May, June and July are the worst —so much the worst, indeed, that twice as many suicides habitually happen in each of them as in any winter month. The average rises, almost regularly, from November to May, and goes down again, in equivalent degrees, from July to November. It is a curious fact also, that, although the natives of hot countries slaughter themselves less than those of cool climates, nevertheless heat does seem to be an incentive to self-murder in these latter regions. In Algeria, for instance, where a good many French soldiers kill themselves from homesickness, it has been remarked that the moment ordinarily chosen is when the south wind blows and brings up from the desert its scorching, irritating dryness. This, with other facts, tends to prove that dampness has not that fertilizing influence on suicide with which it has been credited, and the old theory that suicides in England are mainly caused by the fogs is disproved.

Regarding this influence of climate, it has only recently been shown that it has no effect in producing suicide. Thus, in the comparative catalogue of national suicide, England stands below the middle of the list; but Norway is high up in the table; Denmark is at the very top, while Russia is low down in it. Yet the climates of these countries present such analogies that, so far as regards their action on the character of the people, they may be considered identical. The Esquimaux do not kill themselves at all, neither do the Falkland Islanders; yet the climate in which they live is certainly worse than that of Scandinavia or England.

In estimating the increase of mortality that is caused by hot weather in temperate climates, therefore, we must include that induced by an increase of suicidal tendency. Deaths from this cause are, of course, beyond the reach of the sanitarian. The mortality is not, in any given locality, a large one, yet it is by no means insignificant. In Europe 60,000 persons kill themselves annually, and, assuming that about the same rate exists with us, there are nearly 10,000 Americans who kill themselves every year.—*Medical Record*, Aug. 14.

THE OCCURRENCE OF TAILS IN MAN.

Prof. Virchow (*Virchow's Archiv*, Bd. 79, p. 176), in a brief article on this subject, refers to several cases which have been reported by recent or older writers. Dr. Orestein, of Athens,

surgeon in-chief of the Greek army, has recently reported several instances of abnormal growth of hair in the sacral region, which Virchow designates as "sachral trichosis."

Ornstein's view was that these growths were atavic in character, and were analgous to the hairy tails of inferior animals. Virchow, having met with a case of partial lumbar trichosis, investigated the matter, and came to the conclusion that two similar but distinct conditions may exist,—either a simple growth of hair or a hairless prolongation from the coccyx of a cutaneous nature. Virchow's case appeared, on examination, to be an unusual form of nævus pilosus, situated over the closed spina bifida of an adult woman, and evidently to be explained by the supposition of early local irritation. But, on the other hand, medical literature certainly affords a certain number of examples of true tail-formation in man, this appendage apparently resulting from elongation of the vertebral column. None of these cases, however, were complicated by the abnormal growth of hair. One of Ornstein's cases showed a distinct elongation five centimetres in length. It appeared to originate in the attachment between the first and second false vertebræ of the coccyx. The process itself was hairless, but a decided collection of hair appeared over the sacral region.

Michel has pointed out that in the human embryo a rudimentary tail is distinctly made; and the discovery of men with tails seems to lend support to Lord Monboddo's theory that all mankind originally wore them. Virchow remarks upon the frequent occurrence of a considerable quantity of hair upon the sacral region of new-born children.

One of the longest tails on record is that reported by Gravein 1878(*Virchow's Archiv*, Bd.72, p.129). This occurred in the case of a new-born infant, was 7.5 centimetres in length, and moved about when pricked with a needle. It was removed by an operation. Virchow recently dissected this tail, and found it not to contain any bone, cartilage or muscle; nevertheless, it was a good substitute for a tail.

The custom among certain savage nations of attaching artificial tails to the person has been regarded by some anthropologists as a reminiscence of the happier times of tailed ancestors. Virchow, however, throws some doubt on this —*Medical Times*, July 31.

PHYSIOLOGICAL TEST OF INTOXICANTS.

Dr. Shorthouse says, so the *British Medical Journal* informs us, that if a man partake of too large a quantity of good sound wine, or malt liquor, he usually staggers about from side to side, his gait is very unsteady, and if he come to grief and to Mother Earth, he generally falls on one side or the other. If he take too much whisky, especially that abomination which goes by the name of Irish whisky, he is almost certain to be seized with

an irresistable impulse to fall forward on his face. If he get drunk on cider or perry, the latter more especially, he is certain to fall down suddenly on his back, and apparently without any previous warning. He once saw a number of men who had made too merry at a harvest feast all fall down on their backs, get up again, and fall down again in the same manner. He had never witnessed anything of the like kind before, and was not a little amazed as well as amused. The farmer, who was a very shrewd Herefordshire man, told him that that was the effect invariably produced by perry, of which his men had that day partaken liberally. He has since that time seen several isolated cases, which have corroborated the farmer's version of the action of an overdose of perry or cider. Habitual drinkers of cider or perry are more liable than other persons to paralysis of the limbs; probably this may be due to the sugar of lead with which some cider-makers "perfect" their beverage. It would appear, then, according to this very curious but very doubtful observation, that the various drinks act on different parts of the cerebro-spinal system which preside over locomotion, or act upon the various parts in a different manner, or why these varieties in the method of falling.—*Medical and Surgical Reporter.*

SUSPENSION IN POTT'S DISEASE.

E. Owen (*Br. Med. Journal*, Feb. 28, 1880) has tried the following experiment: A boy, ten years of age, with extensive caries of the dorso-lumbar vertebræ, died. Taking the anterior wall of the abdomen away and removing the viscera, he inserted a large pin into the body of a sound vertebra above, and another below the diseased structures, and then made a careful measurement of the distance between the pins while the body lay in the recumbent posture. Then suspending the body from the arms, another careful measurement was made, when no variation was found in the distance between them from that first observed. The impossibility of changing the amount of deformity at the diseased point was thus absolutely demonstrated. Sayre will continue to apply Bryan's plaster-of-Paris jacket, however, just the same as he has been doing for three years past!—*St. Louis Clinical Record*, Aug.

VALUE OF THE PROPHYLACTIC EXCISION OF THE INITIAL SCLEROSIS OF SYPHILIS.

Dr. J. Chadzynski, of Lemberg (Austro-Galicia), has collected 141 cases where the primary induration was excised. Of this number thirty came under his personal observation. Seventy-seven cases were successful, *i. e.*, secondary manifestations of syphilis were not observed to follow the excision. The author

thinks that we ought to accept the interpretation of Unna, Auspitz, and Cornil, who regard the initial chancre as the first stage in the evolution of the syphilitic virus. Chadzynski appends a number of conclusions to his article. Some of these are contained in the following: Every operator should seek to avoid the reproach of possible erroneous diagnosis by a minute and careful examination of the patient, and by ascertaining exactly his history. Excision, as a prophylactic measure, may be indicated in certain cases, especially those of recent date. Those cases in which adenitis existed before the excision, and in which after the operation the glands were reduced in size or else went on to suppuration, only show that the glandular affection was a "sympathetic" one. The time most favorable for excision is before the glands are involved. In cases of returning induration, a second and even a third excision should be practised, with a view to diminish the quantity of syphilitic virus furnished by the ulcer, and also because, should secondary symptoms appear, they will be of a milder nature. All accessible indurations should be removed by the scissors or bistoury, and the remaining portions destroyed by Paquelin's thermocautery. Future experience will have to show whether excision may not advantageously modify the gravity of subsequent symptoms in cases where a "classic" chancre is already accompanied by a series of engorged glands.—*Annales de dermatol. et de syphil.*, July 25, 1880. —*N. Y. Med. Rec.*

THE INVIOLABILITY OF PROFESSIONAL COMMUNICATIONS.

It is indispensable to the proper treatment of a case that the attending physician be made acquainted with its history. This frequently involves disclosures on the part of the patient which no other consideration than the risk of his own life would induce him to make. Not rarely, they are of such a nature that they would not only blast his reputation were they generally known, but would criminate him, were they made in a court of justice. As such, the law would sanction his refusal to make them, even in the pursuit of the ends of public justice, and to secure the conviction of dangerous malefactors. Is not the physician bound, by every tie of honor and duty, to refuse to reveal such professional confidences, and should not the law protect him to the utmost in this refusal?

We believe that it should, in the fullest measure. Yet the matter is not decided in many States. There are still instances, from time to time, where a physician is called to the witness stand, and the court permits him to be cross-questioned as to professional confidences, and will not admit the plea that he is not permitted to repeat them. In some States, indeed, we believe it has been decided that the physician must testify to the best of his knowledge and belief, or expose himself to the pen-

alties of contempt of court. The law of New York State is more enlightened on this subject. It is given as a sort of *obiter dictum*, in an address on malpractice, last winter, by GEORGE CLINTON, L L. D., late Chief Justice of the Supreme Court of the city of Buffalo.

That learned authority justly states that at common law the disclosures of the patient to his physician are not sacred; and the physician, as a witness, is compelled to testify as to the communications of the patient, however necessary to enable him to judge and prescribe. The Revised Statutes of New York contain an enactment, which, as re-enacted by the code, with some change of phraseology, reads thus: "A person duly authorized to practice physic or surgery shall not be allowed to disclose any information which he has acquired in attending a patient in a professional capacity, and which was necessary to enable him to act in that capacity'.' (Code, Sec. 832.) This language is extremely broad and comprehensive. Judge Clinton believes that the courts will construe it as applying only to information derived from the patient, and apply it only to actions and indictments in which he is directly interested. Surely, if a man be injured by another, the physician who attended him must be admitted on the trial of the injurer, to prove all of the injured man's disclosures, and his bodily conditions and symptoms. In Johnson *vs.* Johnson (4 Paige, 460), Chancellor Walworth held that the testimony of the physician was admissable, he only objecting. But upon the reversal of that case in the Court for the Correction of Errors, Chief Justice Savage maintained what is apparently the true doctrine, that the secrecy of the physician is solely the patient's privilege, and that the physician cannot testify as to the facts within the Statute prohibition unless the patient grants permission. This view of the case recommends itself to common sense as well as to sound law.

The New York Statutes not only protect the physician if he declines to testify without the patient's consent, but they also are framed to punish the physician should he make damaging disclosures without the patient's permission. This is as it should be, for if honor does not seal the medical attendant's lips, then it is well that the law shall clasp its iron padlock on them.

It were highly desirable that these questions were settled in all the States. The welfare of the profession is so closely interested, that medical societies generally should take up the subject and have acts passed similar to those which exist in New York, and which, so far as we can learn, have worked very well. The field of medico-legal studies might be well extended to the more exact defining of the relations of physicians to their patients on the one hand, and to courts of justice on the other.—*Medical and Surgical Reporter*. Sept. 11.

THE CELLULOID HYPODERMIC SYRINGE.

The Celluloid hypodermic syringe, constructed entirely of celluloid, supplies an article which is perfect of its kind. The barrel is clear and transparent, and thus embodies all the good qualities of glass in this connection; but, being made of celluloid, it possesses the toughness and strength of this material, and cannot be broken even by the roughest usage. In addition to its singular strength and durability, the celluloid syringe avoids in its construction the inaccuracies and other disadvantages found in the graduation and operation of even the best glass syringes, because of the difficulty of obtaining a perfectly true cylindrical bore in the glass tubes.

The transparent celluloid syringe barrels are manufactured upon a mandrel. This insures mathematical exactness and uniformity in the bore from end to end, and permits the utmost precision in the graduation thereof.

The new form of hypodermic syringe is evidently an instrument which operates uniformly, with perfect ease, is mathematically accurate in its graduation, and is not liable to break even when subjected to a severe blow.

These syringes are put up in handsome celluloid cases, which are themselves worthy of notice. They are very strong; are always clean and neat in appearance; are not easily scratched or defaced, and maintain a beautiful polish. They are made in various colors, with rounded corners, so as not to catch or wear the pocket, and are fitted with nickel-plated catches and hinges.

Every syringe is warranted as to strength and accuracy of graduation, and the manufacturers, F. G. Otto & Sons, guarantee to replace any celluloid hypodermic syringe, in which the barrel is broken by a fall from any height, or by other similar accidental shock or blow.—*Medical Record*, Aug. 14.

STIGMATA OF MAIZE.

Last winter and again this spring the *News* called the attention of its readers to corn-silk, technically stigmata of maize, as a remedy in nephritic and cystic troubles, etc. The medicinal properties of corn-silk were brought to the notice of the profession by Dr. Dufau, a French physician, in *Le Courrier Médical*. He commends the remedy in uric and phosphatic gravel, chronic cystitis, mucus and muco-purulent cystic catarrh, and in cardiac and nephritic dropsy. Dufau has given it without injury for three months at a time. He has known it to triple and even quintuple the quantity of urine passed in twenty-four hours. He says that in decoction it is unreliable and uncertain. He gives it in a syrup largely diluted, upon an empty stomach. Stigmata of maize is said to have been used from time immemorial by the Mexicans.

Dr. Landrieux, of France, has published two cases showing its diuretic properties. The first was an individual with ascites from cirrhosis. Under the influence of the drug, given in a syrup, the urine arose rapidly from five hundred grams to twelve and fifteen hundred grams. In three weeks all ascites disappeared. The other case was the subject of heart-disease, with great edema of the legs, enormous ascites, pulmonary and renal congestion, and a considerable diminution of urinary excretion. The stigmata of maize increased the quantity of urine from two hundred to eight hundred grams in twenty-four hours. The edema and the ascites disappeared in a short time. Dr. Landrieux terminates his article thus:

1. Not only the different preparations of the stigmata of maize are useful as a modifying agent of the urine, but these same preparations can be equally considered as an incontestible diuretic agent; 2. Diuresis is rapidly produced; 3. The pulse becomes regular under its influence, the arterial tension increases, while that of the veins diminishes; 4. Complete tolerance of the drug, and in chronic cases the treatment might be continued during a month or six weeks without the slightest inconvenience.

We trust that some of our friends have tried this remedy, and will write us the results. We have used it in a single instance, but with decided effect. Two double-handsful of corn-silk were boiled in two gallons of water until but a gallon remained. A tumblerful of this was given thrice daily to a patient of eighty, the subject of dropsy of the legs. His urine was scant, but a thorough examination failed to discover in the heart or kidney or liver any cause for the dropsy. While taking the corn-silk decoction, which relieved his dropsy, he declared that he had never made so much water in all his life.

Professor Scheffer, of this city, is now preparing an extract of the stigmata of maize. Experiments must yet determine the time for gathering the silk, and the proper dose and best form of the remedy. It may be that the silk should be gathered before it is impregnated by the pollen from the tassel.—*Louisville Medical News*, Sept. 11.

THE THIRD STAGE OF ABORTION.

Dr. Theophilus Parvin, in the *Obstetric Gazette*, July, 1880, contributes a practical article on this subject from which the following extracts are taken:—

Indeed, I have long thought that ergot was too much regarded by the profession as the universal uterine hæmostatic, and that it was frequently exhibited with no more reason and with greater injury than tincture of arnica is always used by the public for sprains and bruises. Given a bruise, almost every man, woman and child is ready to prescribe arnica. Possibly

some doctors will accept the prescription, though years have elapsed since the late Dr. Garrod demonstrated that the tincture of arnica was just as valuable locally as so much alcohol, and not a bit better. Given ulceration of the mouth, and chlorate of potassium is commonly directed. Given urinary scantiness or suppression, forthwith spirits of nitre is called in requisition by the nurse, possibly by the doctor. And, finally, let there be uterine hemorrhage, and almost so certainly as the arnica, the chlorate, or the nitre in the circumstances previously mentioned, ergot is called upon as the sovereign remedy. We are so avidious of some universal agent. It is much easier to follow a common rule than to discriminate! My belief is that ergot is a hindrance rather than a help in securing a complete deliverance in cases of abortion. As a casé approaches nearer the commencement of fœtal viability, and with a dilated os, it may sometimes be used advantageously. But practically such are not the cases that bring danger to the patient and anxiety to the obstetrician, for generally they work out their own salvation, and the phenomena, or complications occurring, vary but little from those observed either in premature labor or in labor at term.

I remember in my student days reading in some works upon midwifery, possibly in Dr. Huston's notes upon "Churchill," that the three great remedies for abortion were rest, time and laudanum.* A professional experience of twenty-eight years has confirmed me in the value of the advice, and at the same time has taught me that it should not be followed too explicitly and the means directed not always exclusively used. When the abortion is inevitable we may hold to these means, often remembering to abstain from rupturing the ovum, either with the fingers or an instrument. Let nature's hydrostatic dilator be respected and retained in its integrity; then we may hope for the complete and simultaneous expulsion of the embyro and its appendages just as soon as the cervical canal has become sufficiently softened and dilated. Now, in most cases of spontaneous abortion the oval sac is found unruptured. But unfortunately for human morals, human health and life, and for the physician, many cases come under his care, not of spontaneous, but of criminal abortion, the abortion very frequently having been started by perforation of the sac, and the process of expulsion is then generally tedious, sometimes dangerous. Of course in the first few weeks of pregnancy † miscarriage is usually affected with very little more disturbance of any sort than that incident to a menstrual period, and no special treatment is required. So, too, in and from the fourth month the phenomena are usu-

* Very wisely, too, as I think, Dr. Churchill has written in his Midwifery. "Longer experience has made me less fearful of leaving these cases to nature, and more unwilling to interfere hastily."

† The distinction which has sometimes been made between miscarriage and abortion is purely arbitrary, and there is no reason why the words should not be synonymous.

ally similar to those of labor, and it is altogether exceptional when membranes or placenta are retained, if the practitioner knows how to watch and wait.* But in the second and third months of pregnancy the cases of abortion of most difficulty occur. Nearly one half the number of criminal abortions are found in the first three months, and, as before said, these are frequently induced by perforation of the oval sac. Called to such a case, or to any case of inevitable abortion, must we always interfere at once by active means for immediately emptying the uterus? I think not. It takes time for the rupture of the many uterine adhesions of the ovum, and their detachment will be assisted by tamponing the vagina, still better by tamponing the os uteri, thus causing the very effusion of blood from ruptures already made to hasten other ruptures and giving time, too, for some softening of the cervix, and dilatation of its canal. But if the hemorrhage has been going on for some days when the practitioner is first called, and a few hours after the application of the tampon—if this be not followed, as it often is, by the expulsion of the ovum—especially, too, if the hemorrhage be at all profuse, I believe in instant emptying the uterus of its contents. But how? I shall never forget a remark once made to me by Dr. Fleetwood Churchill. When that most amiable of Christian gentlemen, that wise and admirable teacher had gone with me, just before I left Dublin, to Fannin & Co's., to select some obstetrical instrument, I asked him for an ovum forceps.† His reply was: "Your finger is the best ovum forceps." And in the last edition of his Midwifery, London, 1872, I read, "the use of any instrument of this kind" (he has been referring to Dewees' wire crochet, and the French forceps) "will require great care, and can only be safe so far as their application can be regulated by the finger." yet, is this not too strong a statement?

Certainly I would hesitate before "fishing" with a bent wire in the uterine cavity, hoping there to catch the *corpus delicti* by hook or crook. Nor can I repose implicit faith in the certainty and safety of any of the curettes, one of which has been strongly recommended in cases of abortion. We may draw down the uterus so low that its cavity is readily accessible to the exploring finger, as suggested by Prof. A. R. Simpson. But the uterus enlarged and engorged by pregnancy sometimes proves itself peculiarly intolerant of all severities, and I would rather any operation upon its cavity should be effected while the organ is *in situ*. We may introduce a hand into the vagi-

* One of the puzzles to me is the frequency with which several of the speakers in discussing Dr. Johnson's paper referred to retention of the placenta. But surely there is no placenta up to three months to be retained.

† Let me say a word in this foot note as to the personal appearance of Dr. Churchill. A small man with iron-gray hair, a model of courteous manners, a genial smile, a cordial welcome making even the stranger feel at home beneath his roof. I have sometimes thought that there was a notable resemblance in personal appearance between Dr. Churchill and our own Dr. Holmes, just as there was, as to head and face, between the late Dr. Corrigan, Sir Dominic I mean, and Judge Salmon P. Chase.

nal cavity, and then one or two fingers into the uterus. Mauriceau, by the way, well describes his use of two fingers to bring away fragments of the placenta in a particular case: "I brought away three pieces of the after-birth of the bigness of a walnut, which were left behind, taking them one after the other with my two fingers, as crabs do when they grip anything with one of their forked claws." But the introduction of the hand into the vagina in any stage of pregnancy, and especially during the first months, should hardly be done without anæsthesia.

Still, my question occurs. Is there not a more excellent way than any that has been mentioned? I believe there is. Suppose a case of incomplete abortion having hemorrhage which by its persistence or profuseness brings danger to the patient, or commencing offensive discharge that heralds a possible septicæmia, and then interference is imperative and must be immediate. Let the patient lie on her back, upon a hard bed, her hips brought to its edge, lower limbs strongly flexed; then introduce Neugebauer's speculum, and bring the os fairly in view, now catch the anterior lip with a simple tenaculum, or better, with Nott's tenaculum forceps, and then, if there be any flexion —and it is not uncommon in cases of spontaneous abortion to observe this—use gentle traction to straighten the bent canal; at any rate fix the uterus by the instrument.* Now take a pair of curved polypus forceps of suitable size, or, better still, Emmet's curette forceps, and gently introduce the closed blades into the uterine cavity, open them slightly, then close them and withdraw, when the fragments of membranes can be removed, and the instrument re-introduced. Repeat this three or four times, if necessary, until all membranes or placental fragments are extracted. Then, by means of an applicator wrapped with cotton wool, swab out twice, or oftener, the uterus with Churchill's tincture of iodine—one of the best of local uterine hæmostatics, if not one of the best of antiseptics. Finally, let the patient have ten or fifteen grains of quinia, and it will be very rarely, indeed, that her convalescence is not prompt and perfect.

MATERNAL IMPRESSIONS.

By DR. THOS. WADDEL, of Toledo, Ohio.

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From the foregoing review the following facts seem to be well established;

1. That during embryonic existence certain parts may be hindered or arrested in their development, while the other organs not directly connected with them may continue their evolution and become fully developed.

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* It is well to use a uterine probe in order to ascertain the course of the cervico-uterine canal and the depth and size of the uterine cavity.

2. That ectopia viscera of the abdomen, spina bifida, cleft palate, hare lip, webbed fingers and toes, etc., are only evidence of arrested development of embryonic abdominal, spinal and maxillary processes, or, in the case of webbed extremities, the continuation of the embyronic hand or foot of the second month.

3. That agency causing arrest of development of any portion of the fœtus must necessarily operate prior to the evolution of that part.

4. That the cause of arrested development may be local or general: (*a*) Injuries to the mother's abdomen; (*b*) Diseases of the uterus or its membranes; (*c*) Diseased ovum from diathesis of either parent; (*d*) Hereditary transmission of deformity.

5. That excessive development of parts of the fœtus may obtain, resulting in nevi, aneurisms by anastomoses, supernumerary fingers, toes, etc.

6. That such pecularities are, in common with family resemblance, frequently transmitted through generations.

7. That intra-uterine amputations are the result of amniotic bands, placental adhesions, fracture, or from pressure of a loop of the umbilical cord.

8. That amniotic bands or placental adhesions may result from inflamation of the uterus, its decidua, or inflammatory disease of the fœtus.

9. That amputations may be caused by these false membranes, which may be afterwards absorbed, as also the amputated extremity.

10. That so-called double monsters, or fœtus *in fœtu*, are the result of the development of a double cicatricula on the blastodermic membrane of a single ovum.

11. That twins with a common chorion also result from the development of a double cicatricula on the blastodermic membrane of a single ovum.

12. That in either case there is always unity of sex.

13. That the nearness of the primitive traces to each other determines whether impregnation will result in separate twins or double monster.

14. That in twins with single chorion or anastomosis of the placental vessels, one fœtus may become perfectly developed while the other becomes monstrous.

15. That the development of the abnormality in such cases depends on local anatomical causes, and is governed by definite laws.

16. That every known form of malformation in the human race has its analogue in the lower animals, birds, fishes and reptiles.

From the consideration of all these facts the subject is narrowed down to the following questions, viz:

Can the mother's mind so act on the fœtus *in utero* as to

cause its arrest in whole or in part, and produce its resulting abnormalities?

Can the mother's mind produce the diseases of the uterus or its membranes which result in false bands or placental adhesions, which cause amputation and other deformities?

Can such impression cause the umbilical cord to encircle and amputate a limb or cause the death of the fœtus?

Can such impression reach or act on the newly impregnated ovum, so as to cause the double cicatricula to approach each other so closely as to result in union and double monstrosity.

Is it possible for maternal influence to destroy or deform one fœtus *in utero*, while another enclosed in the same membranes is uninjured?

A large per cent. of congenital deformities being shown to arise from local and other causes, which can have no connection with maternal influence, is it probable that at another time exactly the same deformity is produced by maternal impressions?

Is it reasonable that an intra-uterine amputation will be caused in one case by an amniotic band, while in another it may be caused by maternal impressions?

When it is remembered that no nervous connection exists between the embryo and the mother; that there is no direct blood communication; that the mother's mind can have no influence in causing the pathological states which have been shown to be the cause of the malformation; that during the first weeks of fœtal life the ovum is surrounded by anatomical conditions precluding maternal influence, whereas it has been shown that the vast majority of malformations have their origin in that period of embryonic life in which the ovum is still homogeneous blastema; when all these facts are remembered, it cannot be believed that the mother's mind can change the conformation of the fœtus *in utero*.

All modern authors who advocate the affirmative view of this question (Hammond, Dalton, Tuke and others) admit the impossibility of such effect obtaining except through the medium of the blood. Dr. Hammond says the whole matter rests, therefore, on the question as to whether the blood can undergo change through the influence of the mind and can serve as a means for the transmission of mental impressions. "That it can be so altered, and that it is a medium for communication between the brain of the mother and the fœtus, is sufficiently proved by the records of physiological science as already quoted." The records referred to consist of a statement in the preceding paragraph "that through the blood of the fœtus the mother may be so impressed with the attributes of the father as to transmit them to future offspring." In support of this theory is mentioned (without any history) the case of a mare which had a foal by a quagga, and afterwards had four colts all

marked like the quagga. He further says: "It is not uncommon to see children of a widow by her second husband resemble in mind and body her first husband, provided she had children by him;" also, through this influence "it is often the case that the mother comes in time to resemble the father in mental and physical characteristics. Now, how is this effect produced but through the blood of the fœtus coming in intimate relation to that of the mother? The offspring has received certain physical or mental impressions from the father, it conveys them, through its blood to the blood of the mother, and the latter, in turn, gives them, through her blood, to a subsequent fœtus in her womb. The blood serves as a medium of communication throughout—there is no nervous connection whatever. If through her blood she can transmit certain bodily marks not on her own body to the body of the offspring, why may she not, through the same medium, impart other peculiarities which have produced a powerful impression on her mind."

We have given these views at length to show how far-fetched are the arguments necessary to sustain such a proposition. We believe this to be reasoning from false premises.

1. Where is the evidence that "the blood can undergo change through the influence of the mind, or can serve as a medium for the transmission of mental impressions?"

2. It is not known, neither is there good evidence that the father can through the fœtus give the mother "his mental and physical characteristics."

3. It would seriously conflict with well founded physiological facts to believe that the blood of the mother, which is constantly undergoing change, could retain the impress of the father (given through the medium of the fœtus) for years, and then "transmit certain bodily marks not on her own body to the body of her (next) offspring."

Dr. Dalton's explanation of the fœtal abnormality might be termed a mechanical theory, and has at least the merit of simplicity. "If a nervous shock may excite premature contraction of the muscular fibres of a pregnant uterus and produce abortion, it is certainly capable of disturbing the course of the circulation through the same organ." This is the basis of his etiology, yet he nowhere explains how such a condition of the circulation in the uterus could at one time cause arrested development of an arm, at another a leg, or at another time a failure of closure of the abdominal plates. Again, by his own interpretation, it destroys all relation between the character of the mental impression and the deformity which would follow.

But by far the greatest objection to such a theory is found in the now well established physiological fact, that under normal conditions the circulation in the placenta is exceedingly irregular, arising from the anatomical construction of the vessels; which have their analogue in the cavernous bodies of the

penis—"arteries of entrance, veins of exit, and intervening lacunæ."—*Whittaker.*

But Providence has not left the development of the human fœtus "to the influence of maternal whims and caprices—to an imitative metamorphic power which would result in fœtal reproduction of every object which impresses the maternal mind with disgust and horror."

Indeed, we cannot but admire the provisions which have been made to shield it from such influences. Up to the third month its attachment to the mother is far from being intimate, being sustained by imbibition of an albuminous secretion through the walls of the chorion villi, first during it passage along the fallopian tube, and afterward from the mucous membrane of the uterus, by which it is encapsuled. Very recent investigations have shown that even as late as the second month the ovum is loosely attached to the uterine decidua.

It certainly is not reasonable that the mother can influence the fœtus at such a time and under such anatomical conditions. And yet modern experimental embryology, above quoted, proves that the causes of fœtal abnormalities have their origin in that period of embryonic life while the embryo is still homogeneous blastema.

After the formation of the placenta these protective conditions still obtain, for the vessels of the cord and placenta have no vaso-motor nerves, thus effectually shutting off the injurious influences of the mental perturbations of the mother, which might otherwise act injuriously on the fœtus.

Facts are also strongly confirmatory of this theoretical reasoning, as instance the great frequency of mental impressions of the mother, and the rarity of any sort of deformity.

Dr. Fisher, who has made it a rule to inquire of women regarding their apprehensions of deformity of their offspring *previous to confinement*, found the larger number of 1,200 cases expressed their fear of such a result, and frequently specified the circumstances and the nature of the deformity. And yet only three cases of any sort of deformity occurred in the entire number, and these could in no way verify the mother's predictions. He justly adds that "all the countless longings of these sixty score and more of pregnant women, their excited imaginations, their shocks from objects of disgust and terror, all the hare lips, the wounds, the armless or legless men they saw, the cats and dogs or other beasts they encountered, were powerless to produce a single case of malformation."—*Am. Jour. of Insanity, January,* 1870.

William Hunter, the justly celebrated author of "The Anatomy of the Gravid Uterus," made inquiry of 2,000 cases. "In no case did a single coincidence of mental emotion and a corresponding abnormal development occur in all his observations."

But it is to comparative embryology that we must look for

the most conclusive evidence, for it is now settled by indisputable proofs that every known form of monstrosity found in the human race has its analogue and even occurs more frequently in the lower animals, birds, fishes and reptiles. Now, if we ascribe such abnormalities in the lower animals to impressions made on the brain of the mother, the argument here ceases. For we know it matters little whether the hen hatches her own eggs, or a duck, goose, dog, cat, or even artificial heat, perform the same office. Chickens will always be the result.

Again, in the case of the eggs of fish, embryonic development goes on without any reference to the female which deposited them, provided the required heat, light, etc., be acting. And in both the eggs of fish and fowl thus incubated are developed all of the known types of monstrous formation occurring in man.

If such deviations from the normal states obtain in fish and fowl under circumstances precluding maternal influences, how is it possible to ascribe them to such influences when occurring in the human race.—*Toledo Med. and Surg. Jour.*, August.

THE IMPROBABILITY OF ANY GENERAL "LAW OF THERAPEUTICS."

The desirability of a general law that might introduce simplicity into the realm of therapeutics is not in question. With those who advocate its possibility the wish has been father to the thought. In considering the question, it is natural to turn to physical science and its familiar laws for simple illustrations of the broad conditions necessary to the existence of any natural law, For instance, gases are expanded by heat; water rises to its own level; matter is subject to the law of gravitation; the velocity of a falling body increases in the ratio of the distance that it traverses. Here we have several groups of objects to which laws apply. The individual members of some groups differ widely; thus there are many kinds of gases, and many forms of matter. Nevertheless the members of each group possess certain common characteristics of an essential and definite kind. Gases in general, bodies of water in general, innumerable forms of matter, falling bodies in general, possess such group-characteristics. And the fixed truths called laws which apply to each group, obviously apply to all individual objects possessing those essential common characteristics. Physiological laws, although more complex, illustrate the same broad conditions. For example, the law that reflex movements are excited more slowly through the sympathetic than through the cerebro-spinal system, and continue for a longer time after the removal of the exciting cause. This law is illustrated when we compare the deliberate peristaltic movements of the intestines which are excited by irritation of their

sympathetic nerves, with the quick spasmodic action induced by tickling the sole of the foot. Here are definite elements. The practitioner knows certain essential characteristics which belong to each of the two great divisions of the nervous system throughout its extensive distribution. Reflex movements, the exciting cause, time occupied, are each conceptions which differ widely in their details, but about which also certain definite essential characteristics can be predicated as common to each. The proposition can hardly be denied that natural laws apply only to groups of objects or conceptions, the individuals of which groups possess certain definite characteristics which are common to the whole. *A law cannot apply to objects which admit of no such grouping.*

Indefinite words have much to answer for. But for the vague use of the word "disease," practitioners possessed of modern pathological knowledge could hardly be found to maintain the possibility of finding a general "law of cure;" for *diseases in general appear to admit of no true grouping.* There is indeed one way of regarding them which gives them unity, and is sufficiently simple. Superstition and ignorance have in all ages regarded "disease" as a peculiar entity, a kind of evil influence which takes possession of the body. But, when analyzed, diseases are found to consist of complex and varying conditions with no common group-characteristics. Every attempt at a scientific definition embracing diseases in general is necessarily vague. Dr. Green, in his admirable "Introduction to Pathology,"* writes: "By disease is understood some deviation from the state of health; a deviation consisting for the most part in an alteration in the functions, properties, or structure of some tissue or organ, owing to which its office in the economy is no longer performed in accordance with the natural standard." Probably it would be difficult to improve on this statement. But it contains no indication of any definite characteristic which is common to diseases in general. "Alteration" is of necessity a diffuse and indefinite word. The occurrence even of this vague "alteration" is variable; it takes place only "for the most part." Its seat is indefinite, viz: "some tissue or organ."

The attributes of such tissue or organ which are subject to "alteration" are variable, viz: its "functions, properties, or structure." To obtain a more comprehensive statement it is necessary to resort to a negative description which is still more vague, viz: "some deviation from the state of health," and this negative description is merely reiterated in referring to "non-accordance with the normal standard." If the able author were asked what is "the state of health," or "the normal standard," he might vary the reply, but could probably assert nothing more definite than that it is the absence of dis-

* Fourth Edition, 1868, page 1.

ease—thus adopting the circular method. It would have been unscientific to have attempted anything more positive.

It is true that our knowledge is imperfect. But all that has been learned tends to indicate that it is not owing to imperfect knowledge that we are unable to group diseases in general, or find a comprehensive definition of "disease." The results of incessant pathological and clinical industry throughout civilization tend to separate diseases and to group them into subdivisions, but afford no indication that there is anything distinctive that applies to diseases in general.

Take a few patients, say at a hospital out-patient room. One has a misshapen ineffectual valve in that living pump called the heart, and all the mechanical consequences. He is said to have "valvular disease." Another has serious symptoms due to the fact that a growth detached from one of the heart's valves has been washed along in the circulation, and now forms a solid plug stopping up the channel of an artery. He is said to have "embolism." Another has one or more thriving worms, with tentacles fixed in his intestinal mucus membrane, or encysted in his liver. Another has a concretion of hard, fatty substance lodged in a tube which is too small to readily admit it, and the living tube is spasmodically contracting upon the intruder to the agony of the patient—he is said to have "gall-stones." Another shows a joint, red, swollen and painful, and is said to have "synovitis." Another has breathed an atmosphere charged with special poison, his blood and all the constituent fluids of his body, perhaps the solids, too, have become poisoned and poisonous; he has an infectious fever. Some diseases are essentially due to "coarse" alterations, such as the embolism, whilst the simple inflammation, or the growth of a tumor, are essentially connected with delicate microscopic processes. Patients may complain of a variety of symptoms, which only by skilled investigation are found to be due possibly to a plug of cerumen in the ear, or a stone in the kidney, or a broken rib. Investigation has progressively removed various diseases from the obscure class, and has found that they depend on causes of a kind which are more or less palpable. It is only within the present century that it has become generally recognized that itch is due to a colony of para ites. Not only palpable embolism of modern discovery, but the obscure disease chorea is attributed on reliable authority to minute emboli plugging some of the brain's capillaries.* Whether "functional disease" has any real existence may well be questioned. Derangement of function probably results in every case from derangement of structure, whether that derangement be coarse and persistent, or whether it be deli-

* A kind of *uric acid thrombosis* may turn out to be the cause of the gouty paroxysm,—a crystallization or arrest of uric acid or urate of soda in the degenerate vessels of the gouty, commencing in the languid circulation of the extremities. The deposits in the ear, etc., and all the phenomena, appear to favor my hypothesis, founded on Dr. Garrod's discovery of the presence of uric acid in the blood of gouty persons.

cate and transitory. As medicine learns more and more of the essential phenomena of diseases, it may be that she will dismiss "functional disease" from her nomenclature and regard it as a mere cloak for the ignorance of the past. The diseases of the nervous system which are commonly called functional, are well classified, for instance, by Niemeyer, as "neuroses of unknown anatomical origin." The word "unknown" is a wholesome and refreshing acknowledgment of ignorance, a salutary improvement on the fine expression "functional." The sight of it sends us back to school, and stimulates inquiry.

Only by shutting the eyes to facts, and referring diseases such as the above to one comprehensive group, does it appear possible to maintain the existence of a general law of nature for their remedy. But if they belong to no common group, they can possess no common law. At the present time vendors of patent pills and charlatans find it necessary for their purpose to make comprehensive assertions of the unity of disease. All diseases arise from impurity of the blood, their nostrum corrects this, and is therefore a universal remedy. Or all diseases arise from failure of nervous power. Phosphorus or electricity, according to the particular view of the advertiser, is therefore a universal remedy.

To maintain the existence of a universal law of therapeutics appears nearly as unreasonable as if a watchmaker were to advocate a single principle of dealing with the derangements of a watch. The watch may be suffering from congenital imperfections, or on the other hand from senile degeneration, resulting in organic defects; it may be deranged by the presence of foreign bodies, such as dust, or by general injuries, such as a concussion. Paralysis from local injury, such as a fractured spring, must be distinguished from "functional" paralysis, the result of not being wound up. Sometimes it is a question of "humoral pathology," and oil is required. Sometimes there is derangement connected with undue "oxidation" from climatic vicissitudes.

Now a watchmaker fond of generalizations might possibly regard all watch diseases from a comprehensive point of view. He would imitate the medical writers who theorize about "disease." Naturally he would seek a common "law of cure," or having already advertised the "law of cure," he might not improbably theorize about "disease" in watches, to explain its *modus operandi*.

Had Hahnemann contemplated the facts of modern morbid anatomy and pathology, it is doubtful whether he would have written such a sentence as this:—"To effect a mild, rapid, certain, and permanent cure, choose *in every case of disease*, a medicine which can itself produce an affection similar to that sought to be cured." Practitioners seem unconsciously clinging to mediæval traditions when they talk of the possibility of a natural common "law of cure." So long as an entity, "dis-

ease," is contemplated, the idea is tenable enough. But the bogey belongs to polytheism. Its ancient adherents associated the medical practitioner with magicians, astrologers and wizards. His duty was by the combined use of drugs, rites and incantations, to charm, coax or frighten away the mysterious evil thing that had taken its abode in the unfortunate patient. The "medicine man" of savages has similar duties. And the kind of phraseology commonly dealt in by the best exponents of a supposed comprehensive law of therapeutics is significant. It indicates how impossible it is to maintain their doctrine except by theorizing about the imaginary entity—"disease." Such language, and the ideas associated therewith, tend toward the arrest and retrogression of medical knowledge, just as the superstition of the Middle Ages brought all science to a standstill.

I will quote Dr. Dudgeon's first *Lectures* on this point, to show how a writer may be ordinarily distinguised by logical discernment, yet may fall into this habit when discussing the special theory that he advocates, although writing many years after Hahnemann. On page 115,* he justly depreciates allowing ourselves "to mistake words for ideas, or to accept error, however ancient or time honored, for truth." He discusses the "theories of cure" of various homœopathic authors, all strongly imbued with pagan notions of good and evil entities, and tending to indicate how benign influences prevail over the bogey under the auspices of homœopathic doses. St. George triumphing over the dragon would be an apt emblem of the therapeutic conflicts described. (Why should not some enterprising homœpathic chemist adorn his premises with such a model, as a change from the intellectual-looking yet over-familiar bust of Hahnemann, or occasionally in "alternation" with the latter?) Dr. Dudgeon then explains what he regards as a truer theory, and it is suprising to find how, in doing so, he becomes himself involved in such language as this (p. 110):—

"Now, to the production of morbid action I have stated that the morbific agency acts by producing over-irritation of the part on which it acts, causing increased vital action, which is followed at a greater distance of time by diminished vital action, which gives rise to those phenomena which we call disease. The morbific agents then, natural and medicinal, are both primarily irritant, and cause increased vital action. When a case of disease presents itself to us, we have before us an instance of diminished vital action, in order to remedy which, by the method under consideration, we must apply an irritant capable of stimulating the diseased part up to the healthy level. Now, the medicine that will cause the same morbid symptoms as the disease in question must in its primary action be an irritant that acts on the same part or parts as those diseased, and

* Dudgeon's Lectures on Homœopathy.

obviously this medicine will be the remedial agent for this disease, if we can so regulate its powers as to cause it to do no more than stimulate the diseased part up to the normal level, when of course the disease will be extinguished and healthy action restored, etc., etc."

It would not be fair to quote the above as necessarily indicating the author's present views, for his *Lectures* were published in 1854, and there have long been signs that the more capable homœopaths feel that their old ground is hardly tenable. In 1866, Dr. Francis Black is reported to have said that "his faith 'remains unshaken in the Homœopathic law that medicines tend to cure diseases similar to those they tend to produce.' But he does not look on this as 'a natural law which is universal and admits of no exception,' but rather as a 'rule of art depending on some deeper truth as yet undiscovered.'"* And in 1868, Dr. Gibbs Blake wrote †:—"I think we must be content to claim for our formula a place amongst the empirical laws, and wait until extended observation and experiment either show that it is resolvable into a more general natural law, or that it is a natural law, and the exceptions which are observed are only apparent. I confess that the former appears the more likely." A partial departure from the last position of Hahnemann's system is thus advisedly adopted. A special name and a special profession exposed to the eyes of the laity appear to furnish the only distinctive ground which such practitioners retain in common.

It is wholesome to recognize that there is wanting the first essential condition of a general "law of cure," and that it is the nature of the subject that this should be so. If there is a group of facts which appear to accord with the crude formula *similia similibus*, it is very desirable that their true relationships and limits should be defined. The task may be difficult but it is not insurmountable. It is time to repent of the rashness which deduced from such facts a general "law" of therapeutics.—W. Wilberforce Smith, M. D., M. R. C. P., in *The Practitioner.—Cincinnati Lancet and Clinic*, Sept. 4.

FROM A PAPER ON THE CONTAGION OF CONSUMPTION.

By JAMES T. WHITTAKER, M. D.

The whole question of the contagion of consumption, *i. e.* of the specificity of the tuberculous virus, hinges its upon inoculability, and of this capability there is now scarcely room for doubt. Harnsell (Graefe's *Archiv.*, 25, part iv, 1879) mentions cases of tuberculosis iridis, as reported by Perls, Manfredi, Koester, Leber, Samelsohn, Sattler and Angelucci, and adds

* Paper read at British Homœopathic Society, by Dr. F. Black, reported in *Abstract of Homœopathic Literature*, 1877.

† *Monthly Homœopathic Review.* Quoted in *Abstract of Homœopathic Literature.*

three cases from his own (Göttingen) clinic. He thus establishes the fact of infection of the iris. After mentioning the experiments of others in direct and indirect inoculation of the eye with tuberculous matter, the author then proceeds to detail his own. He found that the insertion of tuberculous matter into the anterior chamber of the eye invariably inoculated the iris. The cornea and conjunctiva, moreover, could be inoculated directly, and in all cases the tuberculous matter inserted "disappeared by the third day, and after from fifteen to twenty-three days of incubation tuberculous collections showed themselves."

The fact that these collections or masses were tubercular was proved after the method of the chemists in recognition of the action of a poison, that is, by insertion into the bodies of other animals. Particles or portions were put into the abdominal cavities of dogs and guinea-pigs. The dogs died of suppurative peritonitis. The guinea-pigs were kept under observation for three months and then killed, when "all the internal organs and the skin were found, without exception, to be filled with deposits of miliary tubercles." Cohnheim tried in vain to excite tubercles in the iris "by introducing into the anterior chamber portions of non-tuberculous animal tissues, of the most varied kind," and Harnsell failed to inoculate tuberculosis with fresh trachomatous matter. "On the other hand, the tuberculous matter used, when introduced into the peritoneal cavity, excited, in turn, general tuberculosis of all the organs."

"*So in Tuberculosis*," as Cohnheim concludes, "*everything depends upon the virus. We discover at all points the closest analogies between tuberculosis and syphilis. Both require, above all things, infection, transmissibility of the disease from person to person.*"

This comparison between tuberculosis and syphilis is exceedingly happy. The conduct of no other infectious disease so closely resembles that of tuberculosis, or so completely clears up the perplexities which beset the disease. To compare tuberculosis with small-pox, for instance, would be fatal to our understanding of either, while tuberculosis and syphilis present so many analogies as to have even led some pathologists to regard one as a form or a product of the other, a conception which is, of course, radically wrong.

Tuberculosis, like syphilis, depends then upon a specific virus which must reach a mucous membrane or a broken surface, to be absorbed and induce the disease. Laennec was convinced that he had inoculated himself once with tuberculosis, just as many an unfortunate practitioner has since inoculated himself with syphilis, by a wound from a saw in making a post-mortem examination upon a phthisical patient. But more fortunate than they, he succeeded in destroying the tuberculous nodule at the start with the butter of antimony.

Syphilis, for the most part, reaches the body through the organs of generation, while tuberculosis is breathed, for the most part, into the lungs, or is swallowed with food, as with milk, the most frequent cause of tuberculosis in childhood.

The first symptoms of each affection are local; in syphilis, at the genital organs, in tuberculosis, at the lungs or in the intestinal canal. From the point of absorption the disease next invades the lymph glands in the nearest vicinity; in syphilis, the glands in the groin, in tuberculosis, the bronchial and mesenteric glands. Passing these glands, or being absorbed into the blood, both diseases become general.

Both diseases may be transmitted by heredity, and both diseases, thus transmitted, may lie latent for a time, for a longer time in tuberculosis, to develop at a later period. During the latent stages, both diseases impair the processes of nutrition, and deform the development of the body. The victim of latent syphilis has notched teeth, falling hair, derangements of digestion, etc. The victim of tuberculosis shows the aspect of scrofula, or has the sunken, elongated chest, ossified ribs, the thorax paralytica; he has also clubbed fingers, and the other well known signs which constitute the *phthisical habitus*. The habitus is therefore an effect and not an inviting cause of the disease. An individual thus affected is said to have the tuberculous diathesis, just as an individual once syphilized has the syphilitic diathesis. Either disease may manifest itself in its well known symptoms at any time. But latent or manifest, the disease is present, just the same, all the time.

There is, then, no such thing as a predisposition to either disease. Either a man has syphilis or he has it not. Either a man has tuberculosis or he has it not. One man is not more predisposed to either disease than another. Syphilis affects one individual more than another, because its virus finds a better lodgment upon his mucous membranes. Tuberculosis finds also, fortuitously, a better nidus in one case than another. The virus of tuberculosis is lodged in one case and not coughed up, just as in syphilis the virus is secreted and not washed off.

Both diseases may disappear from the body entirely, and a perfect cure may result, but it is impossible to state when such complete eradication has taken place. In syphilis the capability of reinoculation furnishes the only definite information in this regard, a method of trial not so likely to be undertaken in tuberculosis. As a rule, however, neither disease does disappear from the body entirely. What Fournier said of syphilis is true also of tuberculosis, viz., that the diathesis is a period of health interrupted by explosions of the disease. Cazenave said long ago that one does not recover from the syphilitic diathesis, but lives with it as with the lymphatic temperament,

and an older writer observed that syphilis strikes with its victims "a truce oftener than a peace."

Both diseases may, and for the most part do, leave in the body centers of future infection. From any chancre, plaque, gumma, or other deposit of syphilis, reabsorption may take place at any time, and reinfection with syphilis, or, better, reappearance of external signs. So, from any caseous nodule wherein the tuberculous virus is locked up in temporary innocence, absorption may take place under favoring circumstances and a new outbreak of tuberculous symptoms appear, the quantity of virus thus set free determining, to great extent, perhaps, the virulence of the symptoms. While the virus is thus locked up the disease is latent: when set free, it is manifest.

While it is true, therefore, of both diseases that they may be inherited, that is, that both syphilis and tuberculosis may affect the ova and spermatozoids as well as every other organ and tissue of the body, it is also true of both diseases that they are in the vast majority of cases not inherited, but acquired. A thorough sifting of the cases will show this statement to be as notoriously true of tuberculosis as of syphilis. So soon as the inoculability of tuberculosis is established, the fact is also established that the disease is acquired oftener than inherited.

With the general recognition of these views, we shall cease to hear of bad air and bad sanitation as direct factors in the disease. The writer of this article once went so far as to develop tuberculosis from depressing mental emotions. Bad air, food or drink, are productive of tuberculosis only when they contain the virus of the disease. In other respects they are no worse for tuberculosis than for any other disease. Drinking water contaminated with sewage does not produce typhoid fever, unless the sewage contain the typhoid germ. So, contaminated air is productive of tuberculosis only when a cause of its contamination is tuberculous virus. Drs. Cotton and Edwards, of the Brompton Hospital for Consumptives, object to the contagiousness of consumption, on the ground that but one nurse and one servant died of phthisis in that institution in a period of twenty-one years. Dr. Cotton went so far as to say that "a residence in the consumptive hospital and long continued working in its wards is a very good way, indeed, *not to catch the disease.*" It must be remembered, however, that few institutions were in such perfect sanitation, especially as regards ventilation, as Brompton Hospital. Anyhow, the statement does not count for much less than to show how close an association is necessary to contract the disease. For the same observation has been made with reference to typhoid fever, an infectious disease beyond a doubt. Liebermeister states that, up to the year 1865, he had never seen in the hospitals which he visited (Greifswald, Berlin, Tübingen) "a single hospital patient, physician or nurse, attacked with typhoid fever, although such cases are placed in the general

wards." And the same author quotes from Murchison to the effect that, "during a period of fourteen and a half years in the London Fever Hospital, 2,506 patients were treated with typhoid fever, and during that time only eight cases originated in the hospital."

The specificity of the tuberculosis virus is determined in a higher school, and by means more in accord with the principles of science than clinical observation. And the recognition of it clears the field for prophylaxis and opens up a new and more promising outlook for the therapy of the disease.—*Chicago Medical Journal and Examiner*, September.

THE LEGALITY OF SANITARY MEASURES.

The love of liberty is so thoroughly taught to the citizens of this country, that it is a matter of serious doubt with many of them whether the care of the health of individuals properly forms a part of the functions of a government.

In times of epidemics, and in the face of contagious diseases, this question becomes a vital one; and at all times the prevision and forethought necessary to protect the community are of little avail, unless supported by the strong arm of public authority. There are not a few diseases, the reduction and prevention of which demand constant attention, to be successful. We may mention small-pox, yellow fever, syphilis, and leprosy, where they prevail, as examples. Compulsory vaccination and the enforced registration of prostitutes and examination of seamen are mooted questions, not on sanitary, but on politico-economical grounds. Is it consistent with a free government to enforce such measures? Does it not transcend the limits of legislative authority to pass such enactments?

If we examine this objection in the light of the most recent authorities, we may reach a correct opinion. If we are governed merely by prejudice or ignorance, we may not.

President Woolsey, in his recent treatise on *Political Science* (vol. II, p. 398), defines the office of sanitary regulations to be to "prevent the introduction and spread of disease." He adds: "Here a very wide field is open, which can be properly taken care of by no association of medical men or philanthropists, but needs that public authority should be vested in some board or commission." In the accomplishment of these objects, Dr. Woolsey recognizes that at times, as for instance in the control of the construction of tenement houses, there may be some decided interferences with an individual's employment of capital, or, as in quarantine, with his personal liberty. Yet he decidedly considers that it is the duty of the State to take such measures.

This opinion of the most eminent American writer on the principles of law coincides entirely with the verdict of the civilized nations of history. The sanitary regulations of the

ancient Israelites, as preserved to us in the books of Moses, are marvelous, minute and severe. In imperial Rome, a special branch of medical officers, the *archiatri populares*, were appointed to protect the public health, and clothed with ample authority for that purpose. In later centuries the barbarism of the Middle Ages, and at present a misunderstood theory of free government, have offered considerable opposition to the enforcement of general sanitary regulations. In the United States this narrow view has even found defenders among the regular profession. Witness the opposition which the organization of the National Board of Health encountered. It was alleged that its powers interfered with "State rights;" that the principles of our Government were endangered; that there was in this Board a seed of centralized power, etc.

So also the regulations attempted to be enforced against the spread of syphilis met opposition, not only from priests and women—classes which, as Thackeray remarks, are always sure to ruin a country when they get control of its politics—but from some medical men of middling good position.

But, as respectable medical men are always found who have embraced homœopathy, favored phrenology, and even opposed vaccination, one can only explain such a phenomenon by believing that a medical man may be respectable and still have such a soft spot in his brain that he cannot tell sense from nonsense on the subjects which he has most studied. Fortunately the number of such weak minded brethren is limited, and the probability is that it will become still more so as the general intelligence on these matters clears up, and the necessity for action becomes more apparent.—*Medical and Surgical Reporter*, Aug. 7.

EPILEPSY AND CRIME.

In *Brain*, quoted by London *Medical Record*, Dr. Clarke has published some very suggestive tables of statistics. He finds it hard to avoid the conclusion that alcoholism in the parents is a predisposing cause of crime and epilepsy. Forty-four per cent. of epileptic criminals were the children of drunken parents. With regard to the parents he finds that epilepsy is more frequent in the mother than in the father, and that the percentage for both parents is higher with the women than it is with the men. In drunkenness the reverse holds good. The proportion of epileptic and insane relatives is found to be very much greater with criminals than with ordinary epileptics. It has been asserted that "sexual desires show themslves early in the children of drunkards, and are associated with absence of moral sense." The author finds that the convictions for bastardy are three times as numerous among epileptics as among non-epileptics—a fact which strongly bears out his idea that epilepsy owes its origin to hereditary alcoholism. Other tables

show that the amount of crime as indicated by the number of convictions is greater among epileptics than among ordinary criminals.—*Medical and Surgical Reporter.*

CALCIUM SALICYLATE IN THE SEROUS DIARRHEAS OF INFANTS

BY ALEXANDER HUTCHINS, M. D.

The fact that the writer has treated in active practice, within the past three months, some twenty-seven cases of serous diarrhea in infants, ranging from two months to two and one-half years of age, using one drug only; that some of the cases were seen but once, many only twice, and none above four times; that in all the disease is known to have been promptly and permanently controlled, justifies putting this memorandum on record, that others may have the opportunity of testing its efficiency and studying the limits within which its usefulness may be relied upon.

In the last volume of the St. Thomas' Hospital Reports, appeared an article on the "Salicylates of Calcium and Bismuth in the Diarrheas of Infants," giving the theoretical reasons for their use and reports of cases, wherein occurred the statement that the treatment had been found satisfactory in the dispensary practice connected with that institution.

That it had been found useful in dispensary practice was an efficient recommendation. I called Dr. Armor's attention to the fact that I proposed using it, when the opportunity presented. Within a short time he reported that he had applied it in one case, where it had responded well and promptly.

My first experience occurred a few weeks later, and as the case was so pronounced and typical, a brief narration thereof will preclude the necessity of further clinical details.

The 25th, 26th and 27th of May were three excessively hot days that ushered in the summer.

On the 25th, a child two years of age, in perfect health and in good surroundings, had been playing most of the day in the open air, exposed to the sudden onset of the intense heat. After a somewhat restless night, at 4 o'clock on the morning of the 26th, the child had a copious movement of the bowels, thin and discolored. Vomiting soon after occurred. Following speedily were other dejections, rapidly assuming a watery character. Accompanying these were frequent vomitings of a thin watery consistence; after two hours the dejections became more frequent, varying from three to ten minutes apart, discharged without effort, sometimes small, then again profuse, always colorless The vomiting occurred after each ingestion of food, water or ice, and frequently independent of these, the rejected material being like the dejecta, watery and colorless; a rapid prostration ensued, the patient soon offering no resistance to the frequent change of the napkins, and indifferent to

the vomiting. For about twelve hours the temperature remained about 105° and the circulation about 140.

The case was in no respect an unusual one. The city is full of such experiences in the summer season. They are always exasperating, frequently and rapidly fatal. The difficulty in treating them is well known. The tendency to collapse is always imminent.

I commenced the calcium salicylate at seven in the morning, giving one and two grain doses every hour, and followed the treatment patiently till two in the afternoon, without making any impression on the frequency or character of the vomiting or dejecta. The condition was serious. It was my first experience in the use of the drug. I was timid as to deserting the old lines of treatment. However, at 2, p.m., I gave it in five grain doses, and the effect was, as near as may be, immediate. Within a half hour began a recognized control of the movements, a cessation of the vomiting and a lowering of the temperature, accompanied by a softening and moisture of the surface. The medicine was repeated every two hours till 10, p.m., when the disease was under control. But three movements occurred between that hour and morning, and on the following day a natural movement was voided.

The foregoing experience was repeated many times during the past two and a half months in cases closely allied to the one related. The indications of treatment seemed to be pretty clearly defined. Whenever the dejecta were of the serous character, whether the flux was more or less profuse, in all the cases where the tendency is to cholera infantum, when collapse is to be looked for from excessive drainage of the serum, the calcium salt acted promptly in checking the frequency of the movements—ultimately in controlling them.

The cases on which this memorandum is based are selected so far as to include all those with the more or less profuse watery alvine evacuations, with or without vomiting, and to exclude all others. The purport of this memorandum is to put on record the fact that these discharges were controlled by the calcium salicyclate with a promptness and efficiency that the writer has never experienced by any other mode of treatment. The patients ranged in age from two months to two and a half years. No discrimination was made as to diet, which in some instances was breast milk exclusively, in others, condensed milk, the patent foods or a mixed diet. In no case was any modification of the previous diet called for, save in the matter of quantity. All the patients were in good social and hygienic surroundings. In two instances the infants were at their summer homes, and the telegraph and mail related the symptoms and conveyed the medicines. In all cases the dose was 3 to 5 grains from two to four hours. The total quantity consumed by each patient varied between 6 and 18 powders. In a few cases minute doses of aconite and veratrum were given during

the stay of the high temperature, and in other few, small doses of quinine were followed up after the subsidence of the disease.

One short series of observations on one drug, in a limited number of cases, in the midst of one set of social influence, during a part of one season, establishes no principle, enforces no rule of action, settles nothing absolutely; but when this series has shown an unvarying issue, it would be more ungenerous to withhold the experience than deficient in modesty in not waiting for further facts.

It was noted that the medicine seemed to have no influence in changing the secretions so as to modify the character of the evacuations. The discharges would be under control for a time. say from two to twelve hours, and the next movement would be a watery one, but there would be no further recurrence of the diarrhea. There might be a return to normal movements, or there might be a change to a diarrhea of indigestion, or to a diarrhea from irritation of the mucous surface, each of which would require some special interference. These sequelæ were exceptional, but in no case did the serous discharge recur.

It was noted, likewise, that this treatment necessitated very little interference with the usual diet of the child. It would be nearer the exact fact to say that no interference was required. In the majority of cases the discharges were so promptly checked that an indigestion did not incur.

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—*The Proceedings of the Medical Society of the County of Kings.*

IS INSANITY INCREASING?

The popular idea shared in by the mass of the profession is that insanity is greatly on the increase in this country. Dr. Chas. F. Folsom, in a series of thoughtful lectures published in the *Boston Medical and Surgical Journal*, discusses at length the subject of insanity, and in Lecture IV. takes the ground that the increase of this malady is more apparent than real. He says, truly, that we cannot obtain lunacy statistics even of a tolerable degree of accuracy in America. And yet he goes on to say that there can be no doubt that there is a moderate increase in lunacy, as well as in all other diseases of the brain and nervous system. On this last point we cannot agree with the learned lecturer. If it is impossible to obtain statistics "of even a tolerable degree of accuracy," on what foundation is it declared confidently that "there can be no doubt of a moderate increase" in these affections? A careful perusal of the extracts we make from Dr. Folsom's remarks must convince any one, we think, that the increase is in all probability only apparent, and is fully accounted for by the lecturer's well-collated facts. If we remember correctly, Dr. Folsom believes

(and we are quite of the same opinion) that intermarriage of relatives is only dangerous in its results to the offspring so far as the cohabiting persons may be of unsound constitution. In other words, the children of close blood relations, if the parents be healthy, vigorous people, without hereditary taint or tendency, are just as likely to possess sound minds and sound bodies as though their parents were in no way related to each other. From time immemorial the church has taught that consanguineous marriages are sinful, and the state prohibits them, beyond a certain degree, because of the supposed deleterious effects upon the offspring. Popular feeling in all Christian countries is shocked by the intermarriage of close relatives; but we believe that the idea is erroneous, and is founded greatly on sentiment. Assuredly it is, to say the least, an open question.

We cannot procure statistics of even a tolerable degree of accuracy with regard to the numbers of insane in the United States or in the several States. According to the various censuses, the proportions would vary from about one in four hundred to one in as many thousand, but these figures are manifestly inexact. The statistics of England, France, and Massachusetts indicate an enormous increase in the numbers of the insane who become a public charge in each successive decade, and the figures gathered from all countries prove conclusively that more insane people are *known* to be in existence proportionately to the population from year to year. The question naturally arises, Is insanity increasing as fast as appears at first sight to be the case, or is the increase apparent rather than real?

In the first place, the definition of insanity has so *widened of later years as to include vastly greater numbers of the population than hitherto.* Large numbers of persons now confined in our asylums would have been considered far from being insane a half a century ago. Until about the beginning of this century the courts almost universally held that to be exempted from punishment on the ground of insanity a man must be deprived of all memory and understanding, and no more know what he is doing than "an infant, brute or wild beast." Less than fifty years ago the capability of repeating the multiplication table was gravely propounded in an English court as a test of sanity in a case involving a large sum of money, while at times insane asylums were veritable Bedlams, where chains and dungeons formed a large part of the treatment. Now you will observe at Danvers that in many wards some patients are quiet and orderly; in some the inmates are as well behaved as the corresponding class of persons outside of asylums; while not a few have either self-control, moral sense, or the faculty of exact and logical reasoning to an extent which would not do discredit to the great proportion of the world at large. In a word, take ten thousand people at random now, and

probably *at least twice as many would be called insane as in the same number fifty years ago.*

Again, it is hardly a generation ago that we commenced taking care of the insane. Some States have not fairly commenced yet, and even in parts of New England, those of unsound mind are neglected and squalid in town almshouses or county jails. In our State, as in England, France, Germany, and *wherever humanity has demanded improved accommodations for the insane, they have accumulated enormously*, from the simple fact that they are protected like children, and *kept from dying of neglect, suicide and exhaustion.* In other words, science and humanity have *prolonged their lives of illness* to as much as tenfold their natural length in some cases, if they were left to themselves, even where nothing can be done but to protract their misery. The more intelligent views now held of insanity as a disease, rather than a possession by the devil, have led people to be *less backward in reporting their insane relatives as such*, while the increasing number of insane asylums and the growing confidence in them have brought many of the insane to notice who formerly would have been concealed in attics or cellars and never mentioned.

The alleged frightful increase in mental disease which statistics can be made to show, certainly does not exist. Whether or not more persons become insane each year in proportion to the population, we have no methods of determining statistically. There can be no doubt, however, that there is a moderate increase in that as in all other diseases of the brain and nervous system. * * The causes of this increase are twofold: first, in the greater predisposition to disease, hereditary tendency; secondly, in the greater number of exciting causes in our complex modern civilization, which forces upon men such an exciting part in the keen struggle for existence, and subjects them to such deep and various affections of their emotions and feelings. The increased predisposition to insanity is one of the indications of degeneracy of stock. Under the fostering influences of our skill and humanity defectives are raised, and many who formerly would have died in early life live to maturity, marry, and beget a feeble offspring predisposed to disease. Persons suffering from the severe neuroses are able to perform the light labor demanded in many of our arts and manufactures who would soon have disappeared, on the principle of the survival of the fittest, when physical strength was necessary for existence. The desperate seeker after wealth and position expends his energy in the eager race, and leaves to his offspring a legacy of exhausted vitality; and many of the fashions of the day encourage moral weakness and physical decay. *Greatest of all curses*, however, in this regard is *the abuse of alcoholic liquors, which certainly stores up more insanity for future generations than any other cause.* * * Insanity is one of the penalties which we are paying, perhaps

not necessarily, for our many luxuries and modern culture in the transmission of impaired energy and strength to descendants, thereby increasing their chances of insanity when exposed also to its exciting causes. In former times the great pestilences swept away a great many of these defectives. Now these very plagues have been found to depend upon natural laws, and to be preventable. * * *

The exciting or immediate causes of insanity are extremely numerous, the disease occurring in order of frequency at the the following periods of life: twenty to thirty (maximum), thirty to forty, forty to fifty, fifty to sixty, sixty to seventy, ten to twenty, seventy to eighty, eighty to ninety, naught to ten (minimum), and *more often in the most ignorant and degraded class of a civilized people than among the higher and educated, reaching its maximum where civilization and misery coexist.* * *

A physician is often asked by parents what is the cause of insanity in their children, when the only true answer can be that it is simply a natural and logical evolution from conditions in the parents themselves, Among its antecedents are not only insanity in ancestors, but also *epilepsy, neuralgia, pulmonary consumption, hysteria, and especially habitual drunkenness.* Excessive overwork or absorption in one great idea of money-making, with the everlasting drive night and day for position or wealth, exhausts the vital energy, and is not an uncommon source of mental disease, mysterious to those who propagate it, but is readily explainable by the medical psychologist. * * *

The *predisposing causes* are chiefly hereditary; drunkenness of both parents, or one at the time of conception; intermarriage of persons, whether relatives or not, with a family tendency to epilepsy, syphilis, rheumatism, chorea, hysteria, habitual drunkenness, dipsomania, insanity, neuralgia, or any of the cerebral and spinal neuroses; the abuse of tobacco, opium and chloral; frequent attempts at abortion; injuries or excessive emotional disturbance during gestation; the risks of birth in large children, including compression of the head, etc.; in fine, any conditions of mental or physical exhaustion and decay. In making up one's mind upon the point of inheritance, it is necessary to examine the history, not only of parents, but of grandparents, uncles, aunts, sisters, brothers and cousins.

Among the *immediate* or *exciting cases* of insanity are the various conditions of ill health, now so much more commonly reported in our asylum records than fifty years ago, as to indicate a decided diminution in the resistance of the race to disease; the misuse of alcohol, opium, tobacco, chloral, etc.; a stagnant life, and occupations exhausting the system without furnishing suitable recreation; disturbances during the period of development and adolescence; masturbation; in women, morbid processes during the great physiological changes in

conception, gestation, child-birth, lactation, menstruation, and change of life, as well as repeated abortions, uterine disease, love affairs, seduction; sexual excesses; great emotional disturbances, fright or shock, adverse circumstances, loss of friends or relatives, domestic troubles or grief, religious anxiety or excitement, disappointed affections, wounded feelings, excitement of politics, business, etc.; pauperism and want; epilepsy; injuries to the head or spine; sunstroke; the various acute diseases: the cachexia of syphilis and pulmonary consumption; heart-diseases producing disturbances in cerebral circulation.—*Louisville Med. News.*

THE CURABILITY OF INSANITY.

Among the questions yet *sub-judice* in psychiatry is that of the precise ratio of permanent cures which takes place among the insane. That insanity, under judicious medical management, if begun in its early stages, is as curable as most of the other grave maladies, has been satisfactorily attested by all experienced alienists.

The records of the hospitals for the insane make quite as good an exhibit in the matter of cures, to the credit of our science and art, as the records of other hospitals, and they have been prepared and presented to the profession at large, and to the public in precisely the same way, namely; whenever the patient has, to the best of the chief physician's diagnostic discernment, appeared to be recovered, he has generally been so pronounced and recorded, that is where the form of the disease has not been known to be recurrent.

There is, however, the exception in favor of the hospitals for the insane, that convalescents are longer retained in them than in general hospitals, after convalescence appears, in order to more securely and permanently establish and be assured of their restoration, if unwisely, the persistent importunities of friends do not procure the patient's premature removal to his home, contrary to the wiser counsel of the physician and to his true interest, as not unfrequently happens, resulting in the patient's relapse on again coming within the influence of the exciting cause or causes at home, which, in the first instance, precipitated the patient's overthrow.

Thus, by re exposure to the causes which excite them, the insanities, like other diseases, recur.

It has even been found that in some organizations, insanity is as tenacious and as repeatedly recurrent, as the oft-returning manifestations of syphilis, scrofula or intermittent fever, and that it constitutes in this regard, no exception to the rule applicable to all disease, save certain contagious affections, the exanthemata, especially, which through some permanent, but occult change, caused by one attack in the impressibility of the nervous system, seem to secure immunity against a recurrence.

The general hospitals of the United States and their medical staffs have never been arraigned, that we know of, either by medical societies or public outcry for reform, for misleading professional or public opinion by recording as recovered such cases, as to all appearances, are well when they go from the hospitals, notwithstanding the majority of the patients that go out of a general hospital certified as cured, are likely to be again similarly afflicted, some of them *again* and *again* in the course of their lives, that is, *if they are skillfully treated, as they generally are in this country.*

All hospitals—for the sane as well as for the insane—that have been for any considerable length of time in operation, if the methods of treatment pursued are efficient, must show, in the course of time, repeated recoveries of the same person from the same disease, *i. e. more cases must recover than persons,* for it is the nature (with the exception noted above) of disease to recur.

It would be a sorry day for the Profession of Medicine and for afflicted humanity, if the time should ever come when we could not cure repeated recurrences of the same disease in the same person.

Dr. Pliny Earle, the Superintendent and Physician of the Southampton (Mass.) Lunatic Hospital, an accomplished practical alienist of great experience, has undertaken the labor of ascertaining precisely the exact proportion of permanent recoveries that have taken place in the Hospitals for the Insane of the United States, during the latter half of the present century.

These results have appeared in two papers, contributed to the January number of this JOURNAL, and in less completed form, in the Northampton reports. Dr. Earle found that of all the recoveries reported at the Frankford Institution for the Insane, near Philadelphia, 48.39 per cent. remained permanently cured, while the remainder of them had recurrences of their disease once and oftener during the course of their lives.

In looking over this interesting subject, Dr. Earle finds it recorded at the Frankford Asylum that five persons had recovered 52 times; 5 at the Hartfort Retreat, 54 times; 10 at the Bloomingdale Asylum, 122 times; and the same number at the Worcester Hospital and Concord Asylum, respectively, 136 and 120 times in the course of their lives.

These patients lived to quite an advanced age notwithstanding their affliction, and it is quite an instructive showing in favor of the skillful, restorative and conservative methods (so far as prolonged vitality is concerned) of these institutions.

That a malady so persistent in its tendencies to recur, outside of an hospital, as to re-appear 484 times in only 40 different persons, can be so often cured, is an overwhelming and irrefutable argument in favor of the present asylum methods; and shows that these institutions are capable of doing almost everything, except of

making over anew an hereditary neuropathic organization surcharged with the insane diathesis.

When we consider the gravity of insanity, and reflect that under the most rigid and merciless handling of the statistics of its curability ever made (a method to which objection has been made by high authority), it is still shown that about one-half of all the persons who have been treated in our hospitals for the insane, during the last forty years, have recovered, a large part of them never to relapse, while the recurrent cases have recovered again and again; we have just reason to be proud of what the profession of medicine has done for the insane, notwithstanding the sad fact daily confronts us that many of these unfortunates, like the hopeless victims of hereditary cancer or phthisis, because they cannot be born again, and of other and better endowed ancestry, are fated to ultimate destruction, despite our best efforts to rescue them. When medicine shall teach *typhoid* and *phthisis* not to recur and *tabes* not to persist, or surgery shall train *cancer*, when once cut out, to never come back again, then, possibly, might the profession, overlooking the utility of our hospitals for the insane in vast amelioration and mitigation of evils which they can not yet wholly eradicate, acquiesce in and sustain assults made on these estimable institutions for the lack of perpetuity in all of their reported recoveries. Till then, what cannot be cured must be endured.—*Alienist and Neurologist.*

GOUT A NEUROSIS.

Dr. Dyce Duckworth closes a rather lengthy article in the April number of *Brain*, arguing for the neurotic theory of gout, with the following conclusions, which sum up the principal points he offers:

1. I contend that the diseased conditions which are recognized as of unequivocal gouty nature, are primarily dependent upon a functional disorder of a definite tract of the nervous system, and that, thus, gout is a primary neurosis.

2. That there is much in the nature of the malady itself, and much evidence forthcoming by way of analogy, to warrant the conjecture that the portion of the nervous system specially involved is situate in some part of the medulla oblongata, where, possibly, may be placed a trophic centre for the joints.

3. That the gouty neurosis may, like others, be acquired, intensified and transmitted; also, that it may be modified variously, and commingled with various neuroses; that it may suffer metamorphic transformation, or be altogether repressed.

4. That this diathetic neurosis imposes its type upon the affected individual in definite nutritional modes, affecting the assimilating and excreting powers, exhibiting marked peculiarities in nervous impressibility, and determining, in more or less degree, a physiognomy of the gouty.

5. That a large part of the phenomena known as gouty are

due to perverted relations of uric acid and sodium salts in the economy, resulting from the morbid peculiarities mentioned under the last head. Thus there is excess of urate of soda in the blood before and during gouty explosive manifestations, and there is determination (by nervous influence, in all probability) either of this salt to the affected part (Garrod), or there is a too frequent formation of it at these inflammatory points, whence it is deposited locally and also set free into the circulation (Ord).

The renal excretory power for uric acid appears to be temporarily inhibited as part of the process of gouty paroxysms. This measure of renal inadequacy would appear to prevail in varying degree as a part of the specific neurosal disorder. In chronic gout, when structural disease has occurred, either tubal, with deposition of urate of soda, or interstitial, with shrinkage of the organs, the renal inadequacy may admit of more mechanical explanation.

6. That in primary or inherited gout, the toxæmia is dependent upon the gouty neurosis; is the outcome, in whatever degree, of it, and is, therefore, a secondary manifestation.

7. That in what I term secondary or acquired gout, the toxæmia is directly induced by such habits as overload the digestive and excretory organs, and constantly prevent secondary disposal of nutritional elements of food; that if, together with such toxæmia, distinctly depressing and exhausting agencies affecting the nervous system come into operation, the special neurotic manifestations of the gouty diathesis will occur, and be impressed more or less deeply upon the individual and his offspring.

8. That this theory of gout, better than any other, correlates all the known factors concerned in the production of the varied symptoms of the malady; and while it displaces its humoral pathology from the pre-eminence it has so long occupied, it takes full cognizance of it, and seeks to place it in a clearer relation to the phenomena of the disease.

9. That if it be desirable to refer various maladies to their distinct place in pathology, without reference merely to their chemistry, histology or neurology, the affection known as gout may perhaps most correctly be relegated, along with some others, to a class of diseases which may be termed neuro-humoral.

10. An argument is adduced from the *juvantia* afforded by colchicum, in favor of the theory which has been set forth.—*Journal of Nervous and Mental Diseases.*

ACUTE PHTHISIS IN A DOG, FROM DIRECT CONTAGION.

D. H. Gullimore, M. K. Q. C. P., reports the following case in the *British Medical Journal*, May, 22d, 1880:—

About six years ago, when I was acting as Residency Surgeon at Mandalay, a Bengalee servant, suffering from advanced pulmonary consumption, with copious expectoration, came under my notice. One of my dogs—a pariah—developing his natural talents as a scavenger, was, as I afterward learned, in the habit of frequently visiting the house of the sick man, and lapping up the expectorated matter. How long this had been going on I cannot with certainty say; but a few days after the death of the man the dog appeared out of sorts, refused his food, rapidy emaciated, had a cough, which increased quickly in severity, and was attended later on with a tenacious and glairy discharge from the mouth and nose. The stethoscope detected moist *râles*, with rhonchus and sibilus over a greater part of the chest. These symptoms continued to grow worse for a week or ten days, when convulsive fits of about five minutes' duration, and occurring several times in the course of the day, made their appearance. These fits were of an epileptiform or tetanic character. The poor animal moaned a good deal and appeared in great pain as he lay on his back reeling and kicking about. On the second day from the commencement of the fits, and about the twelfth from the beginning of the disease, there being but little hope of recovery, a large dose of prussic acid was given, which speedily proved fatal.

The post-mortem inspection was limited to the contents of the skull and the chest, as these were the parts supposed to be more prominently diseased, and in both were found lesions to account for the symptoms during life, and their probable cause. Both pleuræ were adherent, the adhesions being recent; and the lungs were studded with softened patches, in varying stages of caseous degeneration, many of them containing muco-purulent matter, with which the minute and larger bronchi were also clogged. I did not notice the state of the bronchial glands. The brain did not show much signs of disease, and nothing similar to what existed in the lung. The membranes appeared thickened and congested, and on cutting them a good deal of serum exuded; there were no tubercular or cheesy deposits; the whole mass was uniform, and appeared softish, but I had no previous experience of the canine brain, and cannot speak with certainty.—*Medical and Surgical Reporter*, June 12th.

SEX IN EDUCATION.

In our recent discussion of some of the medical aspects of education, we omitted to say anything of this question as it relates to the difference of the sexes. The omission has been brought to our mind, and we cheerfully devote a few words to it.

The questions which interest medical men in relation to this subject are mainly these: Are girls physically adapted to sus-

tain the same course of study as youths? Is the co-education of the sexes desirable? What limits does physiology set to the business and professional education of women?

The first of these inquiries seems to us to have received a positive reply in the affirmative by that inexpugnable authority, experience. The doubt was long raised that as much brain work as youths perform would interfere with the regularity of the menstrual function in girls; and that the sickness incident to these periods would prevent them from equal competition. The facts are not so. Either the brain work of the average youth is never enough to hurt the average girl, or else the latter can stand more than she has hitherto had credit for; the result of large experiments, carefully conducted, prove conclusively that the girls of this country can carry out the course of study in our high schools and colleges without exposing themselves to either more sickness or greater mortality than the other sex. There are, moreover, quite as many examples of distinguished scholarship among the girls as among the boys.

There is no such unanimity on the question of the co-education of the sexes. Up to the present time the best authorities differ. Friends of the movement point to numerous institutions where the sexes are educated together with the best results. The diffidence and coarseness of the boys almost wholly disappear; the audacity and coquetry of the girls are hardly known. The sexual erethism, which in both sexes is so mightily fostered by isolation and segregation, quite disappears in the indifference produced by familiarity.

President Noah Porter, of Yale College, in his work on Education, acknowledges that considerations of health offer no decisive objections; that in some institutions the presence of both sexes appeared to be advantageous to the morals of both; that serious physical evils as well as moral ones attend the isolation of boys in schools and colleges; but that, for all that, there would be such dangers to modesty and purity in the education of both in many institutions, that in his opinion the system should be confined to very narrow limits.

We must leave the inquiry, therefore, without any positive answer, though believing that the accumulating evidence is in favor of the plan of co-education under certain not severe restrictions.

A more vital question is the fitness of woman for pursuits hitherto generally supposed to be only adapted for men. There has been a great deal of cant and selfishness expended in the arguments against her. All the talk about her smaller brain and her weaker powers belongs to this category of cant. Most educated women one meets impress one as quite the intellectual equal of the ordinary doctor, lawyer, or preacher—often as his superior. With the same technical training as these, the woman would probably do as well or better, inasmuch as she neither

drinks, smokes, chews, talks politics, races horses, nor seeks doubtful characters of the other sex—habits, one or all, that very few professional men are free from.

The physical disqualifications she is under are those of menstruation and motherhood. In regard to the former, Dr. Mary Putnam Jacobi has shewn, from a large study of American women, that only a small minority are disabled from active work by their monthly sickness, and that, in the majority, it does not interfere at all with their regular pursuits of whatever nature.

Pregnancy, maternity and serious uterine diseases are positive, though temporary and not universal obstacles. They must certainly debar woman from many pursuits, and prevent, at least, the regular attention to others. Those, however, who have seen the steady labor in the fields undergone by the peasant women of Europe, and that at the counter by the wives of the bourgeois of Paris and other French cities, or the heavy burdens carried by women over almost impassable roads in the mountanous districts of Norway and Sweden, the carrying power of two women being considered equal to that of one horse, certainly must acknowledge that much that has been written on this subject, in this country, is singularly futile, and either the product of ignorance or partisanship.

The proper position for a scientific mind to take, and the only way in which this question can be satisfactorily settled, is to let it be brought to the test of experience. Give women free access to all trades, vocations and professions. Put no obstacles in their way. Let them try their strength in all arenas. Where they are competent they will be competitors; where they are not, the iron law of the extinction of the unfit will operate to drive them back, without the need of any artificial obstructions.—*Med. and Surg. Reporter*, July 31.

HONORARY LL. D'S.

Annual Meeting of the British Medical Association.

Mr. Editor.—Yesterday the degree of honorary LL. D. was conferred by the university in the senate house upon Dr. C. E. Brown-Séquard, F. R. S., Professor of the College de France, Paris; Dr. Chauveau, of Lyons; Dr. F. C. Donders, Professor of Physiology at Utrecht; Dr. S. D. Gross, of Philadelphia, U. S.; Sir William Jenner, Bart., K. C. B., F. R. S.; Sir William Gull, Bart., F. R. S.; Sir George Burrows, Bart., F. R. S.; Mr. William Bowman, F. R. S.; the Rev. S. Haughton, M. D., F. R. S.; Mr. Joseph Lister, F. R. S.; Dr. Denis C. O'Connor; Mr. John Simon, C. B., F. R. S.; Dr. Andrew Wood, F. R. S. E.

Scarlet gowns were worn in the senate-house by doctors of the university on the occasion.

The reception given to the Nestor of American surgery, Dr. S. D. Gross, was most gratifying. The selections for the above distinction from the old university had been so well made that, with a single exception, each recipient of the honor was individually greeted with the hearty applause of all in the senate-house, which was too closely packed to afford standing room to another of the crowd who pressed for admission at the open door and windows. * * * * * * *

EDITORIAL.

We lay before our readers the following reports in regard to a form of fever recently prevailing on the lower Mississippi river. The circumstances which elicited these reports are as follows: The senior editor of this Journal having been informed that the oldest practitioner in the Parish of Plaquemines, had pronounced a fever prevailing in that parish to be yellow fever, requested Dr. G. M. Sternberg of the U. S. Army, now on special duty in this city, to go down and investigate the disease. The report of Dr. Sternberg, published first, will show his opinions in regard to the matter. Some question being made in respect to the correctness of Dr. Sternberg's conclusions, the writer acting in his capacity as a member of the National Board of Health, determined in the interests of science as well as in the paramount interests of public health, to order a new investigation.

To this end he requested Dr. J. Dickson Bruns and Dr. J. P. Davidson to unite themselves with Dr. Sternberg in a second visit to the seat of prevalence of the fever, and after due investigation to make a further report. Our readers will see that the result has been two reports, one, signed by Dr. Bruns and Dr. Davidson, and the other by Dr. Sternberg, alone.

The gentlemen signing the majority report are two of the most accomplished and experienced physicians in the City of New Orleans. Dr. Sternberg's reputation in the scientific world is sufficiently well known to require no notice at our

hands. In the action as above set forth, the writer was seconded and assisted by his colleague on the National Board of Health, Dr. R. W. Mitchell, who also accompanied the commission, but without participation in their discussions or reports

It is proper also to say that the writer adopted the majority report as his rule of conduct, but by this action did not presume to adjudicate the questions at issue from a scientific standpoint.

[Copy of Report by Dr. Geo. Sternberg, U. S. A.]

NEW ORLEANS, September 10th, 1880.

Dr. S. M. BEMISS, Member National Board of Health:

SIR—I have the honor to report that, in compliance with your request, I have visited Point Michel and Point a la Hache for the purpose of ascertaining the nature of the sickness prevailing there. Dr. Hays, in whose practice most of the cases have occurred, aided me in every manner possible, and in his company and that of Dr. Taylor, who represents the State Board of Health, I visited about twenty cases of the prevailing fever. Many of Dr. Hays' patients are convalescent, but in the practice of Dr. Hebert, on the opposite side of the river, I found three recent cases in one house, and three in another distant five miles from the first. In one of these houses, we also found the dead body of Andrew Dragon, a light mulatto, aged 17, who died about two hours before our arrival. Dr. Hays has had in his practice 61 cases, and Dr. Hebert, so far as I could learn, 7 cases of the prevailing fever. The first case occurred August 15th in the practice of Dr. Hays, on the right bank of the river, seven miles below his house.

The following day, a case occurred two miles above the first. On the 20th (Aug.), another case occurred in the vicinity of the first, and one within two miles of Dr. Hays' house. On the 22d, two cases; on the 23d, two cases, and on the 24th, two cases were taken sick, in the neighborhood of the first case. On the 24th, three cases also occurred in a locality 1¼ miles above the Doctor's house, this was followed by three on the 25th, and three on the 26th, in the same locality. Dr. Hays was also called to see a case on the opposite side of the river, four miles below his house, on the 23d. In the locality, 1¼ miles above Dr. Hays' house, four children have died in the family of Giordano. The two remaining children in the family had been seriously sick, but at time of my visit appeared to be convalescent. A young man named Littel, aged 19, also died in this vicinity, making six deaths in all on both sides of the river, in a total of 65 cases. It is not my intention at present, to study this local epidemic from an etiological

point of view: I desire simply to state such facts as I was able to glean, in a single day, which have a bearing upon the question of diagnosis. While abundant rains fell during the month of August, above and below this vicinity, I am informed that for a month, until quite recently, there was no rain in this immediate neighborhood, also that a disagreeable odor was observed to come from the *batture* along the river bank. Rice is cultivated extensively in the vicinity, and one or two of the cases were taken sick while at work in the rice fields. I would observe here, however, that nearly all of the cases are young children, and that the adults who by reason of their exposure in the rice fields, would be most subject to malarial poisoning have to great extent escaped. The cases have mostly been children of French creoles—light mulattos—who constitute the greater portion of the population in this vicinity. I inquired as to whether any of the cases had previously suffered from yellow fever, but could not get any very definite information. A similar fever prevailed in 1878, which some physicians called yellow fever, but Dr. Hays believes it also to have been malarial fever. The area in which this fever prevailed, on the right bank of the river, was somewhat different from that in which most of the cases have occurred this year. The fever of 1878, did not extend below a certain point, while the fever of this year has been mostly below this line. As to the nature of the disease, it is a continued fever of a single paroxysm, lasting it is said from a few hours to four or five days. No regular temperature observations have been made, but from the statements of Dr. Hays, and my own observations, I am satisfied that the fever is of a mild grade, and not characterized by remissions or intermissions. The highest temperature observed by me was 103⅕°, (second day of disease). At the outset of the attack the eyes are glistening, pupils more or less dilated, gums, bright red and swollen, tongue slightly or heavily coated with a white fur. In some cases it was almost clean and in one dry and brownish. The skin is usually moist and perspiring. In two cases I noticed that the excitement caused by our presence caused the perspiration to cease and the skin to become dry. Pulse rather soft and not very frequent (in two cases, second day, in which I counted, it was 100). Slight pain in head and loins, at commencement of attack. Afterwards no pain was complained of, except occasionally some epigastric distress. There was bilious vomiting at the outset, in some of the cases. In others no vomiting occurred. In only one of the fatal cases (child of Giordano) was there a suspicion of coffee-ground vomit. One or two had nose-bleed, at the commencement of the attack. No other hemorrhages were reported. Dr. Hays had not discovered any albumen in the urine of his fatal cases. In Dr. Hebert's fatal case the urine was highly albuminous and suppression occurred 16 hours before death. The depending portions of the body of this young man presented a mottled

appearance, two hours after death, the natural color was light yellow. I did not discover any decided yellowness of the conjunctiva in any case. Yellowness of the skin I could hardly have distinguished on account of the complexion of the patients. I found albumen in three cases. Other cases in which no albumen was found were too far advanced in convalescence or too early in the disease to make the absence of albumen a point of diagnostic importance. In one case, in which the most abundant deposit of albumen occurred, a boy of 12, the boy was dressed and sitting up. He had slight fever, glistening eyes, red spongy gums, and slight headache. Finally, as to the diagnosis, I believe these cases to correspond with what is known in the Antilles and tropical America as *fièvre inflammatoire*, *fièvre d'acclimation*, *fièvre jaune bénigne*, *fièvre jaune abortive*, *fièvre jaune des creoles*, *dengue*, *etc.* Bérenger-Feraud says of these fevers: "These fevers may exist sporadically, like the yellow fever, and also epidemically, *but it is, above all, at the approach or decline of the epidemics of yellow fever that they are observed in the greatest number.* They present different forms, the most frequent form is observed among people *who are subject to be attacked by yellow fever.* It offers all the symptomatic appearances of the first degree of yellow fever—coloration of the skin and eyes, elevation of temperature and pulse, cephalalgia, rachalgia, contusive pains in the limbs; but whatever may be the intensity of these symptoms they all disappear at the end of 24 or 48 hours, and recovery takes place." In 1875 Béranger-Feraud lost but 3 cases in 400, and in 1876, 1 case in 210. Such is the resemblance of this form of fever with the first degree of yellow fever, that when it is observed sporadically without an epidemic of yellow fever, the doctors of the country say, "If we were in the time of yellow fever, we would say that it is yellow fever." Béranger Feraud claims that this fever prevails everywhere that yellow fever reigns, and says, "It is a disease very near, if not identical with yellow fever—an incomplete yellow fever."

For me the fever is identical with yellow fever, and only differs in degree from the more severe forms which, because of the fatality which attends them, are known and dreaded by all. It seems to me extremely unscientific to make our diagnosis depend upon a greater or less percentage of mortality, and the sooner physicians in the yellow fever zone, admit, what I believe to be true, that yellow fever is not always a malignant disease, and that the immunity of creoles is due to their having suffered (generally in childhood) from this milder form of the disease which has received so many different names, and that it is not a birth right, the better will it be for the progress of medical science and the true interests of commerce where these diseases prevail.

THE RICE FEVER.

Reports of DOCTORS BRUNS *and* DAVIDSON *on the Fever which Prevailed in Plaquemines Parish.*

No. 142 CANAL STREET }
New Orleans, September 18, 1880. }

S. M. BEMISS, M.D., Resident Member National Board of Health:

Dear Sir—In obedience to your request of the fourteenth of September, that I should "proceed to the lower coast of the Mississippi River to inspect and report in regard to the prevalence of any infectious or other forms of fever prevailing in that section of the State," I have the honor to report that, on the morning of the fifteenth, at 8 A. M., the committee, consisting of Dr. J. P. Davidson, of the State Board of Health; Dr. G. M. Sternberg, surgeon United States Army, and myself, with Dr. Mitchel, of the National Board, who kindly accompanied us, and my son, Mr. H. D. Bruns, who volunteered to make the necessary autopsies, if opportunity offered, proceeded on the steam tug Aspinwall, directly to Myrtle Grove, the plantation of Dr. J. B. Wilkinson, the oldest and most experienced physician in the parish of Plaquemines. We there learned that the doctor had been called to visit a case of fever on the left bank of the river, seven miles below, in consultation with the resident physician, Dr. N. M. Hebert. We reached the place designated, five miles above Pointe-a-la-Hache, too late to meet Dr. Wilkinson, but had the good fortune to encounter Dr. Hebert, who, with great courtesy, at once invited us to see his patient, a typical case, as he regarded it, of the prevailing fever. The following was his account of the case:

Paul Gravolet, white male, aged 22 years, had sat up for two nights with Adrian Dragon, sick of the fever and had afterwards attended his funeral. It was the body of this A. Dragon which Dr. Sternberg had seen on his previous visit to the parish and noticed in his report. A short while after, on the afternoon of the tenth, Gravolet was taken with a chill, followed by violent headache, pain in the loins and legs, nausea, retching and fever. Dr. Hebert visited him for the first time on the twelfth instant, at 8 a. m., and found him suffering from fever, with a hot, dry skin—temperature not noted. The vomiting of bile and mucus continued; the eyes were congested; the tongue moist, streaked in centre, red at tip and edges, was covered with a white fur; the fur had disappeared on the fourth day, leaving the whole organ red; the gums were red and swollen, but firm; there was much restlessness throughout the attack; the respiration was tranquil, without sighing; he complained of slight pain on pressure over epigastrium; the urine had been abundant, and free from albumen; there had been no delirium. Comp. cath. pills, followed on Monday by calc. magnes. had acted freely, and quinine, in 4 gr. doses, until 52 grains were taken—in 48 hours—had been ordered, after the action of the magnesia. The doctor could

not say that he had noticed any decided remission at the period of his visits, morning and evening, but had sometimes found him perspiring. He had broken his thermometer and could not tell what the diurnal variations of temperature may have been.

At the time of our visit, 1:30 P. M. September 15, the pulse was 8 to the minute, temperature 101 1-5 deg. F., respiration normal, tongue clean, gums pink and firm, skin pleasantly warm and soft, presenting no harshness nor pungency to the touch; the face was flushed, without capillary congestion; the body was of the natural color, and neither it nor the eyes showed the least tinge of yellowness; the *facies* was perfectly calm and the patient cheerful. He complained of some pain on pressure over stomach and abdomen. At 11 A. M. he had passed a small quantity of bright, florid blood by stool. The urine was abundant. A fresh specimen, tested on the spot, yielded, on the addition of nitric acid, a light precipitate, which cleared up perfectly on boiling. At our second visit, a little after noon the following day, we found him still convalescing. He had passed a little bright blood by stool during the night, but had slept well. The pulse was 60 to the minute, temperature 99 3-5 deg. F. No albumen in urine.

In the same neighborhood we saw, with Dr. Hebert, Pierre Dragon, white, male, aged 5 years, the younger brother of the above mentioned Adrian. Three days before our visit, he had recovered from an attack of fever; but, two days after convalescence, had partaken freely of sardines and chicken for breakfast, and at noon was seized with violent vomiting and purging. There had been no hemorrhage from bowels. The child was calm and cheerful; the skin soft and moist; the temperature carefully taken in axilla was 100 deg. F. The pulse of the little patient, much excited by our presence, was, by first count, 110 to the minute. At the close of our somewhat protracted visit, it had fallen to 92. There had been six cases of fever in this family. All had recovered but Adrian. A small specimen of the patient's urine, very dirty, full of hairs and mucus, was secured. It threw down a flaky deposit on the addition of nitric acid, not cleared by boiling. As a substitute for filtering paper a single thickness of newspaper was tried. I thought it a clear case of failure; but, if trustworthy; the urine contained a trace of albumen. At our visit in the afternoon of the following day, the patient was convalescent, though still somewhat ferverish.

Another patient of Dr. Hebert's visited by us in this neighborhood was Eliza Martin, white, female, aged fourteen years. She had come from New Orleans on the afternoon of the tenth, and was taken with fever three days after. She had been treated with calomel and quinine. On the second day of her fever (Tuesday) Dr. Hebert reports a well marked remission in the morning. When seen by us on Wednesday at 3 P. M. her

pulse was 120 to the minute, temperature 103 2-5 deg. F., the tongue soft, moist, marked by the teeth, covered with light white fur; the gums pale, pink, firm; *facies* calm; skin pleasant to touch and bedewed with slight perspiration. There was a tendency to diarrhœa and slight pain was complained of on pressure over abdomen. Urine, tested on the spot with nitric acid and heat, was free from albumen.

On the opposite side of the river, at the Franklin Rice Mill, we also visited, with Dr. Hebert, a patient of Dr. Hays', Michael Halceran, a native of Louisiana, white, male, married, aged 33 years. He had been taken on the twelfth, at 10 A. M., with chill, violent headache and pain in back and legs, accompanied by gastric distress and vomiting. The last continued throughout his attack; but we learned from his friends, and from his physician later, that this gastric irritability characterized him even in health. He is a confirmed dyspeptic, vomits his food frequently and is unable to retain a dose of medicine, unless it be disguised, and concealed even from his suspicion. Dr. Hays informed us the next day that when he first saw Halceran, at 12 M. on Sunday—two hours after his seizure—the temperature was 103 deg. F. Of his temperature Monday he had no record and did not recall it, but on Tuesday he found it to be 101¾ deg. F. at his morning visit, and 102¼ deg. F. in the afternoon. He was said to have had yellow fever during the epidemic of 1867.

At the time of our visit, we found him perfectly free of fever. He conversed cheerfully and readily, and his whole appearance was indicative of rapid and firm convalescence. The temperature was 100 deg. Fahrenheit, pulse 62 to the minute, full, soft, slow; tongue clean and moist; no yellowness of conjunctivæ or skin. Auscultation of heart revealed a soft, aortic, systolic murmur. Further inquiry, afterwards confirmed by Dr. Hays, revealed the fact that the patient had suffered from more than one attack of acute rheumatic fever. The urine showed a small quantity of albumen, probably persistent.

In an adjacent room I saw Mrs. Halceran, wife of above, well advanced in convalescence from a similar attack of fever, lasting only forty-eight hours. She complained of feeling a little weak; but had a good appetite, which she had been indulging for some days freely and without harm. Though we touched at this point the following day, we did not think it worth while to visit these patients again.

Moving down the right bank of the river we stopped at Dr. Geo. H. Hays' residence, Point Michel, and were immediately joined by the Doctor, who came on board the tug, and took us to visit some of the more interesting cases of his own, then under treatment. The great majority of the patients he has had were well or convalescent.

Wm. Gilmore, white, male, aged nine years, was taken at midnight Sunday with the usual light chill and pains in back

and legs. Dr. Hays, at the date of his first visit, about noon on Monday, found him with high fever, hot, dry skin, frequent, quick pulse, white, furred tongue, and free from nausea, or pain at epigastrium; the respiration was slightly hurried, without sighing, and there was no jactitation. His temperature was 105 deg. F. The following forenoon it was 105 deg. F.; in the afternoon 104½ deg. F. On Wednesday morning it was 104½ deg. F. At the time of our visit, 5:20 P. M., it was 103 deg. F. Although an unusually nervous child, and ministered to by a still more nervous mother, who hastened to inform him that the visit of so many doctors did not necessarily portend immediate dissolution, his expression was placid, exhibiting neither alarm nor depression. The conjunctivæ were pinkish; but there was no intolerance of light, nor pain on pressure over the eyeballs. The face was slightly flushed, without capillary congestion. The color of the body was natural, and there was no yellowness of skin or eyes. To the touch the surface was dry and warm, without harshness or pungency. The pulse was 100 deg. F., to the minute; respiration normal, no suspiria. The bowels had been freely moved, the dejections were natural, the urine copious. There was slight uneasiness manifested on pressure over epigastrium and abdomen; but he made no complaint, except of slight headache.

The following day we visited him again at 10 a. m. He had slept well; had two rather thin stools during night, the last at 4 a. m.; with both had passed urine freely. The pulse was 92 deg.; temperature 101 3-5 deg. Fahrenheit. *Facies* cheerful, skin pleasant. From the excessive nervousness of the little patient, we could not secure a specimen of urine for examination at either visit.

In this locality we also visited with Dr. Hays, Millaudon Potoon, black, male, aged fourteen years, who was said to have had a relapse, succeeding a fever of four days' duration. We saw him again the following morning. At neither visit did he have any fever. The skin was rather cool, temperature normal, pulse soft and very compressible, but not frequent. The appetite was feeble, strength much exhausted, mind spiritless and dejected. He answered questions willingly, but slowly and without animation. The decubitus was lateral, with the legs, semi-flexed, and we found him lying in exactly the same position, with the same air of utter indifference, on our second visit as we had left him on our first. He made no complaint, and on repeated inquiry, admitted no special discomfort. His mother told us that he had been at work in the fields up to the date of his first attack; but the very great emaciation he exhibited was certainly not attributable to the brief acute attack he had experienced. He looked to me to be like a well advanced case of tuberculosis, and on inquiry I learned from Dr. Hays that his father had died of phthisis pulmonalis. Dr. Hays had

never examined his chest, and his condition and surroundings were such as not to invite my personal auscultation of him. A specimen of his urine exhibited, on the usual tests, an abundance of albumen.

In the same room lay a younger brother of Millaudon, convalescent from a mild attack of the fever.

At the Quarantine Station, which we reached at 9 P. M., we found to our regret the assistant quarantine physician, Dr. C. P. Wilkinson, down with the fever. He had been taken with the usual symptoms of chill, headache, pain in the back and legs, at 6 A. M. on Sunday, the twelfth, and when visited by us on Wednesday at 10 P. M. was, therefore, within 8 hours of completing his fourth day. The quarantine physician, Dr. Finney, had kept an accurate record of his temperature—the sole instance in which we had the fortune to obtain it—from which it appeared that, on seizure, his temperature was 100½° F. At noon the same day it was 103 and the same in the evening.

	Temp. F., deg.
Monday morning	101
Monday afternoon	104
Tuesday morning	101
Tuesday afternoon	104
Wednesday morning	101
Wednesday afternoon	104
And at 10 P. M., as taken by myself	103

He had, when we saw him, a hot skin; broad, moist tongue, covered with white fur; pulse 90°, full, soft, regular; no precordial nor abdominal distress, nor vomiting, throughout the attack. He had taken quinine in ten-grain doses three times on day of attack, but owing to the irritation it excited, had at first moderated and then discontinued its use. Wednesday he had taken two three-grain doses. He talked to us with unusual animation and energy that night, and the following morning when we visited him, a little after daybreak, we found him perfectly free from fever, in high spirits, and only anxious to resume as soon as possible the duties which he has performed with so much zeal, fidelity and intelligence.

Dr. Wilkinson is a native of Louisiana, aged thirty years. He stated that he had had an attack of yellow fever, in common with other members of his family, in 1855.

At an early hour the following morning, September 16, we crossed the river to Buras's Postoffice, which lies immediately ooppsite the Quarantine Station. There we had the pleasure of meeting with Dr. Westerfield, whose practice extends for many miles above and below that point. The sum of the information gathered from him was to the effect that the fever had prevailed very extensively in that neighborhood—principally above—which he attributed to the batture, there being a caving bank, washed by the river, below. The fever had made its first

appearance early in August, and about ten days thereafter had spread through the entire settlement, as many as five, six and seven cases occurring in single families, and in some of these death by yellow fever had happened in 1878. The majority of his cases had been among white children. Negroes enjoyed, seemingly, more immunity, and females still greater. The average duration of the fever was about 48 hours, he thought. It yielded readily to quinine; fevers chiefly of the remittent type, though he had seen a few intermittents. There had been no death in his practice, nor had he seen a single case in which there was jaundice, black vomit, or suppression of urine.

Dr. Jones, whose area of observation and practice lies on the same bank of the river, between that of Dr. Westerfield and that of Dr. Hays, and with whom we passed some time, later in the day, had treated about thirteen cases in all. There was, he thought, a well-marked remission in every case he had seen, but he had made no thermometric observations. The exacerbation took place toward night. The fever yielded readily to quinine, which he gave freely. The only difficulties he had experienced in the management of his cases arose from the tendency to undue cerebral excitement in children. He had lost none, nor had he seen any case with jaundice, black vomit or suppression of urine.

Dr. Ryan told Dr. Davidson that, at Pilot Town, the same fever had prevailed extensively. He regarded it as a malarial fever, remittent in type. It yielded readily to quinine, He had no death in his practice, nor had any of his cases been attended with yellowness of skin or eyes, or black vomit, or suppression of urine.

Visiting, with Doctors Hays, Hebert and Jones, who joined us, such cases of special interest as we had seen the previous day, we reached Myrtle Grove about 2 a. m., and after an interesting conversation with Dr. J. B. Wilkinson—who, with two of his sons, paid us a virit on the tug—steamed directly for the city, which we reached at 6 p. m. on Thursday evening.

Through your own forethought and Dr. Mitchell's attentions, we enjoyed every comfort possible on such a trip, and I take this opportunity, on the part of the whole commission, to express their deep sense of the courtesy they received from all the medical practitioners of the coast, who, with equal candor and cordiality at great self-sacrifice, devoted a large part of two days to showing us every case of interest in their practice, and to giving us all the information that could possibly throw any light on the object of our mission.

From personal observation, and from the information gathered on the spot, I have no hesitation in expressing, with the utmost confidence, the conviction that the disease now and lately prevailing on the lower coast is an endemic malarial fever, of remittent type, and for the most part of a mild char-

acter. Its unusual prevalence is due partly, to the meteorological conditions of the past summer, and partly, I believe, to the widely increased cultivation of rice. The alarm it temporily excited was owing to its fatal results in a single family, at the outset. Beyond this isolated instance it has been attended with the slightest mortality, and but for that it would have scarcely excited comment except as to its prevalence and diffusion. The diagnosis obviously lies between malarial and yellow fever, and the reasons for assigning it to the former class seem to me patent and indisputable.

In the first place, all the practitioners in the infected district agree in the opinion, unqualifiedly expressed, that the disease is remittent fever, such as they are accustomed to treat every summer. The laity seem generally to share their views, giving the fever the trivial names, indifferently, of *la fièrre du pays* or *la fièvre paludienne*. Its ready amenability to quinine is, in itself, a strong proof of its miasmatic nature. If accurate records had been kept they would have been of prime assistance in arriving at certain conclusions; but, owing to loss or breakage of instruments, Dr. Hays was the only physician we met possessed of a thermometer, and the infrequency of his visits, from the great number of patients and the distances to be traveled, lessened the value of his observations as a clinical aid to diagnosis. Nor was it possible, from the most painstaking inquiry, to extract any supplemental information from the attendants or families of the sick. For the most part untrained, ignorant, careless, incapable, alike of observing or describing the most familiar phenomena, the utmost that could be hoped from them as nurses would be to give a dose of medicine at prescribed hours. Under these circumstances the general impression of the medical attendant as to the continued or interrupted course of the fever is the only evidence that can be had, and this, as I have stated, was uniformly to the effect that, in all the cases, diurnal remissions occurred, usually in the morning, judging from lowered pulses, diminished heat of skin, moisture, etc.

In theory and in the text books a remission is a well-defined, notable abatement, at calculable intervals, of all the more prominent symptoms of the fever, lasting for many hours. But at the bedside, especially in our graver forms of autumnal fevers, a remission is too frequently an obscure, imperfect and ill-defined pause, as it were, between two prolonged exacerbations, filling up almost twice the entire round of twenty-four hours. The temporarily lowered pulse swiftly resumes its force and frequency; the moisture, slight and transient, extending only over the forehead, face and neck, quickly dries up; and the accurate and continued observation which marks the brief return of the same phenomena at the same hour of the succeeding day can alone truly interpret their quality and meaning.

With their imperfect opportunities and means of detecting such remissions it is scarcely to be wondered at that the physicians had no charts to exhibit. But Dr. Wilkinson was suffering when we saw him from the same type of fever that we had been seeing all day, and in his case the record kept by Dr. Finney supplies the missing link. It shows an access of fever, lasting all Sunday, with a well-marked remission in the morning and exacerbation in the evening of the following day, and the exact repetition of this rise and fall of temperature on two successive days thereafter, terminating at the end of the fourth day in a complete apyrexia.

Had a similar record been kept in all the cases, I do not doubt that it would have equally exhibited their remitting character, though, doubtless, in many of them the remissions may not have been so strongly marked.

So much concerning the type. Of the nature of the fever, without multiplying details, I will simply say that neither in its special features nor in their entirety, could I realize a single prominent characteristic of yellow fever.

The broad, white, lightly furred tongue, moist in all stages, lacking the dry, brown centre, or fiery tip and edges; the firm gums, free from sordes or oozing; the clear or only lightly suffused eye, not smoky or brilliant or dull, with no tinge of yellowness; the warm, pleasant skin, neither bathed in hot sweat, nor harsh, nor pungent to the touch, nor bronzed, nor jaundiced, nor exhibiting capillary congestion; the universal freedom from jactitation and delirium; the normal respiration, neither hurried nor labored, nor sighing; the *facies*, free alike from terror or depression, calm, cheerful, smiling; the notable absence of any stage of calm intervening between a primary and secondary fever, or of black vomit, or tarry dejections, or suppression of urine, or sudden cardiac syncope, render it as certain as clinical observation can that the fever is not yellow fever.

And if we except the Giordano family, the extremely light mortality is no unimportant factor in the conclusion. Dr. Hays attributes the death of these four children of one household to their intractableness and refusal to take medicine. Now, in the graver forms of malarial fever, the early and free administration of quinine often offers the sole means of saving life; but I cannot help thinking that, in this instance, there coexisted some peculiarly malign local influence not made out, or special family predisposition not understood—a fact we are called on frequently to deplore. For of at least 150 cases that we can reckon, and doubtless a large number of others among the negroes, who neither sought nor obtained medical assistance, scattered along both banks of the river, under bad hygienic conditions, crowded in close, dark, damp, ill-ventilated rooms, seen usually late, and necessarily infrequently, with no nursing or worse, lifted out of bed or seated up for every

occasion, in every stage of the disease, and fed or starved as fortune favored—improperly or unseasonable often, and as the waking or the whim of the nurse chanced; out of this large number of cases, as we have said, but two deaths have occurred. Yellow fever, wherever it prevails—so far as I know—stands high among the most fatal diseases of our nosological table.

Nor is there any hint of such a march of the disease from house to house, or by personal contact, as can almost always be traced in contagious diseases breaking out among a sparse population, and never so easily traced as under such conditions as exist here, where the dwelling-houses are stretched along in one continuous and unbroken line, following the curves of the levee under which they lie.

What are the facts? Dr. Westerfield told us that his first cases occurred early in August, and by the tenth, after a pause of a few days, the whole settlement was involved. Dr. Hays gives a somewhat similar history of his section; but his first case did not occur until the fifteeth of August. Now the middle of Dr. Westerfield's line is directly opposite the Quarantine Station. Dr. Hays' practice lies many miles above. And at first sight this might seem to furnish a clue to the source of the disease, if it were yellow fever—although we know of but one infected ship, the Excelsior, at quarantine this summer, though of course many ships from infected ports have been detained there from time to time. The solution of the phenomenon, granting the disease to be malarial, is not far to seek. Owing to the shorter distance to the Gulf and the natural configuration of the land, drainage in the lower is much more rapid than that in the upper part of this area. Mr. F. C. Brooks, a planter of the neighborhood, informs me that, although the rice matures in both sections about the same time, the difference in time of drainage—the water being let off the fields simultaneously—is from seven to ten days, nearly. As the water is let off usually about the middle of July, the fever, as might have been anticipated, made its appearance along the river from below upwards just so soon as the hot suns of July and August could draw up from the reeking ground the miasm which, whatever its specific nature, is doubtless telluric in its origin.

Finally, the epidemic now prevailing in the Parish of Plaquemines is, unhappily, not confined to the lower coast. Along both banks of the river as far up as Donaldsonville, in Jefferson, in St. John Baptist, St. Charles, St. James and Ascension. I am informed by my friends—physicians and planters—that the same or a similar fever exists. Since the latter part of June I have treated in New Orleans a fever identical with that which I found in Plaquemines, invariably remittent, and many of the cases far more serious than any which I saw below. A few days only before I started on this mission I had treated for a severe remittent the clerk of the Alvin, a packet in

this lower coast trade. He was seized with the fever on the coast and brought to the city with it.

And this widespread outbreak of malaria, during the present summer, is generally attributed by the residents along the river, above and below, to the increased acreage under cultivation in rice. In a letter from Dr. E. Duffel, of Ascension, dated September 13, and received on my return—that most competent observer says: "I am very busy, having a great many cases of malarial fevers, at times very fatal, particularly if neglected at first. One of the worst complications is congestion of the brain, and few if any, recover when thus affected. The extensive cultivation of rice in Louisiana will be very detrimental to the health of the people and a scourge."

A planter on the lower coast tells me that eight or nine years ago malarial fevers were comparatively infrequent and mild in that section, but have increased in numbers and severity just in proportion to the increase of the rice area. I do not doubt the truth of the statement, which is in strict accordance with all we know of the history of rice culture and its connection with miasmatic fevers elsewhere, notably in South Carolina and Georgia. In Louisiana two potent causes will contribute to the increased cultivation of this cereal. The poor man will give a natural preference to a crop which can be raised with small expenditure of labor and which needs no capital to take it off; and the wealthier sugar planter finds in it a valuable accessory to his main crop—harvested early, commanding cash readily, and furnishing, at the very season he most needs it, the large outlay required to convert his standing cane into a marketable commodity.

Whether the health of New Orleans will thus be endangered only time can show; but that our hitherto salubrious lowlands, if turned into paddy fields, will become hot beds of malaria, hostile to the health and perhaps fatal to the presence of the white race, there is little reason to doubt.

I have the honor to be, very respectfully, your obedient servant.

J. DICKSON BRUNS, M. D.,
Chairman Committee on Fever of Lower Coast.

I concur with the above full and able report in regarding the disease prevailing on the lower Mississippi coast as essentially a miasmatic fever of a remittent type, occasioned by the emanations from the rice fields stretched along the coast, and its diffusion over so extended an area as probably due to the peculiarities of the present season, characterized as it has been by long-continued rains, followed, at harvest time of the rice, by very hot and dry weather. I saw no case of the fever which, in my judgment, could be said to present the diagnostic signs of yellow fever.

J. P. DAVIDSON, M. D.

MINORITY REPORT.

I regret to say that I can find no good reason for changing the opinion given after my first visit to Point Michel as to the nature of the fever prevailing in that vicinity.

I have not seen during either visit any case which *alone*, would enable me to make a positive diagnosis of yellow fever, but from a consideration of all the cases seen by me during my two visits, and of the facts relating to the origin and progress of the epidemic, I can not doubt that this fever is the mild type of yellow fever which has been described under various synonyms given in my previous report, and which Blair, more properly, calls "yellow fever *simplex*," to distinguish it from the more malignant type called by him "*gravior*."

The main facts upon which I base this opinion are the following: The first cases, so far as I can learn, occurred in the practice of Dr. Westerfield, directly opposite the quarantine station, about the 1st of August. It will be remembered that the infected bark Excelsior was anchored at this point for eleven days, from June 24th to July 5th, and again from July 12th to August 16th. No cases occurred in Dr. Westerfield's practice for four or five days after the first case, when six cases occurred in one family, one and a half miles below; then seven cases in another family, about the middle of August. It was about this time (August 15th) that Dr. Hays saw his first case, 7 miles down the river from his house. This locality subsequently furnished a considerable number of cases, at least 15. Later, (Aug. 24th) an infected locality was developed 1¼ miles above Dr. Hay's house. Up to this time no deaths had occurred, but in this locality four children died in one family, and a young man in the immediate neighborhood. Still later, September 4th, the fatal case of Andrew Dragon, and other mild cases in the same family occurred in the practice of Dr. Hebert on the east bank of the river and several miles further up stream.

In the practice of Dr. Wilkinson on the west bank of the river and just above Dr. Hays, no cases of the same fever have occurred.

Dr. Westerfield says that his cases occurred mostly where there is a batture on the river front, where there was no batture he has had no cases. He says the disease has taken the same course as in 1878. He does not recollect that one of the cases of this year had fever in 1878. The majority have been children. Has had some severe cases with great irritability of stomach, but no deaths. Did not examine the urine or make temperature observations.

The theory that this fever results from malarial emanations from the rice fields seems to me untenable from the history of the epidemic as above given; from the fact that adults are most exposed to these emanations, while children are most subject to this fever, and that in various localities where rice is cultivated, as in Dr. Wilkinson's practice, this fever has

not prevailed. I am informed that a similar fever does prevail at Port Eads, where there are no rice fields. There is however, in this vicinity a pilot's village and a custom house station, so that it is presumable that communication with infected vessels occurs before the vessels are subjected to disinfection,etc. I am also informed that communication between this point and the City of New Orleans is unrestricted, At the quarantine station I find a little settlement, two or three houses, within a few hundred yards of the wharf, over which the quarantine physician has no control. The facilities for intercourse with infected vessels are certainly not insurmountable, and I find, moreover, that river packets which touch all along the banks of the river on their way up and down from New Orleans, are in the habit of tying up for the night at the quarantine wharf.

There is, therefore, no difficulty in accounting for the introduction and dissemination of a disease such as I suppose this to be, and from my point of view, the battures along the river banks furnish favorable local conditions for the increase of the specific poison of the disease, if by any means it is introduced during the summer months.

As to the clinical history, I have no reason to believe that all the cases of fever on the river banks have been of the same nature. Drs. Wilkinson, Hebert and Hays all state that cases of intermittent fever constantly occur in their practice, and doubtless autumnal remittents prevail to some extent. Temperature observations have only been made in a few cases, but the history given me by Dr. Hays and Dr. Hebert, of the cases which I have seen, is of a continued fever of a single paroxysm, lasting from twenty-four hours to four or five days.

I have obtained an incomplete record of temperature in two cases only.

Romney Gilmore, aged 10, was taken sick at *midnight* Sunday night (Sept. 12th.) No chill, temperature 106°; Monday morning 105°, evening 104½°; Tuesday morning 104°; Wednesday, 3 P, M., 103; Thursday morning 101⅗°. I was unable to obtain a specimen of urine for examination in this case.

Michael Halceran, aged 33 says he had yellow fever in 1857; taken sick at 10 A. M., Sunday (Sept. 12th), temperature Sunday noon 103°; Monday morning 101¾, evening 103¼; Wednesday morning 101°. Has albuminous urine, highly acid and containing granular tube casts.

In one case in the practice of Dr. Jones, a relapse occurred from exposure before complete convalescence was established. We found this patient, a boy of 12, very much prostrated, and having highly albuminous urine of acid reaction, containing granular tube casts.

This is the fifth case in which I have found albumen in the urine, and that in a fever which is chiefly characterized by the mildness of its course and the absence of distressing symp-

toms. A very different fever, in my view, from the high grade of malarial fever, with a tendency to local congestions and hemorrhages, which occasionally presents the phenomenon of albuminous urine. In one case, in the stage of calm, the patient had a pulse of 60 beats in the minute. I should say from my observations that this fever is characterized by rather a slow (after the 1st day) and soft pulse, a perspiring skin, a clear intellect, and an iritable stomach. I did not observe yellowness of the skin or conjunctiva in any case, but do not look upon this symptom as a common characteristic of the milder form of yellow fever. My experience in regard to this point corresponds with that of Blair, who says :

" It certainly must be admitted that a large proportion of the cases of yellow fever are unattended by yellowness of the surface or even of the eye, for the disease may be cut short by treatment (?) or the epidemic may be of the simplex grade, or the " mitior," and the yellow suffusion may be so slight as to escape notice. The total number of cases has been about 100 exclusive of those occurring in the practice of Dr. Westerfield, whose figures I did not obtain.

The temperature chart in the case of Dr. Wilkinson, as given by Dr. Finney, certainly justifies a diagnosis of remittent fever, but as already stated the history given me by Dr. Hays and Dr. Hebert, of their cases both upon my first and second visit was of a contined fever.

Dr. Wilkinson, Sr., the most experienced practitioner in the vicinity who has been called to see many of the severe cases in consultation made an unqualified diagnosis of yellow fever. He is perfectly familiar with the malarial fevers of the country and has seen much of yellow fever, has had cases of malarial fever in his practice this fall, but considers the severe cases of continued fever which he has seen in the practice of Drs. Hebert and Hays as undoubted cases of yellow fever. Dr. Hebert evidently is much inclined to agree with Dr. Wilkinson. Dr. Hays insist that the disease is a malarial fever *of the same type as he saw in* 1878, which some practitioners in the vicinity called at the time yellow fever, but which he has never admitted to have been yellow fever.

Respectfully Submitted,
GEO. M. STERNBERG,
Surg. U. S. A.

New York, 41, West 20th street,
July 31st, 1880.

Editor Medical and Surgical Journal, New Orleans, La.:

Dear Sir—Having been selected by the Paris Committee-(Messrs. Ranvier and Dumontpallier) having charge of the subscription for a monument or memorial to the late Prof. Claude

Bernard, to represent them in the United States,—I beg leave to be allowed to use your columns for the purpose of appealing to the members of the medical profession and all others interested, to subscribe to this worthy project.

I need hardly remind your readers of the great debt which every practicing physician owes to the labors of the illustrious physiologist whose memory we are asked to honor in this way.

All inquiries and subscriptions, in the shape of bank checks or postal money orders should be addressed to me.

Trusting that I shall have the advantage of your active personal support in the matter, I remain,

Yours, very respectfully,

E. C. SEGUIN, M. D.

In Memoriam.

Died on Wednesday, September 22, 1880, at his residence, No. 157 Camp street, DR. JOHN M. CULLEN, a native of Yazoo City, Miss., aged 33 years, and a resident of New Orleans for 15 years

Dr. Cullen graduated in the Medical Department of the University of Louisiana in 1869. He was valedictorian of his class. Selecting New Orleans, he entered the practice of his profession and achieved prominence, Soon after graduation he was appointed Assistant Demonstrator of Anatomy at his Alma Mater. Courteous, manly and true, the profession can ill afford to lose such a member. To his wife and family we extend our heartfelt sympathies.

Died, at 9:30 A. M., August 17th, 1880, at his residence, 291 Huron street, Chicago, FRANK HOWARD DAVIS. M. D., aged 32 years, 2 months, and 12 days.

The sad announcement of the death of this estimable member of the medical profession is only increased when we turn to the venerable father, Prof. N. S. Davis, and conceive what must be the loss to him of such a son.

Graduating in 1871, after adding to his knowledge by months spent in the hospitals of Vienna, his brief professional career had been bright and full of hope. Taking an active part in promoting the scientific interests of the profession, his loss will be felt beyond the home circle.

Meteorological Summary—August
Station—New Orleans.

Date.	Daily Mean Barometer.	Daily Mean Temp'ture.	Daily Mean Humidity.	Prevailing Direction of Wind.	Daily Rain-fall.	General Items.
1	30.064	81.6	76.0	East.	.11	Highest Barometer, 17th, 30.223.
2	29 945	81.5	73 7	North	.02	Lowest Barometer, 13st, 29.617.
3	29.856	80.7	73.0	West.	1.17	Monthly Range of Barometer, 0.606.
4	29 965	76.2	83.7	North	1.31	Highest Temperature, 92° on 30th.
5	30.030	79.0	66.7	N .W.	.00	Lowest Temperature, 71° on 5th 29th.
6	30.029	81.5	65.7	N .W.	.00	Monthly Range of Temperature, 21°.
7	30.066	82.0	67.0	East.	.00	Greatest Daily Range of Temperature,
8	30·067	80.5	79 3	S. E.	.17	18° on 29th.
9	29.996	80.2	78.3	South	.37	Least Daily Range of Temp., 6° on 4th.
10	30.001	78.0	79.3	South	.54	Mean of Maximum Temperatures, 8.75°
11	30.066	75.5	95.0	N. E.	.56	Mean of Minimum Temp., 75.7°.
12	30.074	79.7	84.0	East.	.29	Mean Daily Range of Temp., 11.8°.
13	30.031	81.7	79.7	East.	.00	Prevailing Direction of Wind, S. E.
14	29.989	81.5	78.7	South	.00	Total Movement of Wind, 3,961 miles.
15	30.016	82.5	75.0	South	.03	Highest Velocity of Wind and Direc-
16	30.138	84.0	73.3	S. E.	00	tion, 27 miles, S. E. on 11th.
17	30.179	83.2	69.7	East.	.02	Number of Clear Days, 6.
18	30.127	83.5	71.0	East.	.01	Number of Fair Days, 18.
19	30.020	82.5	67.3	S. E.	.00	Number of Cloudy days on which no
20	29 926	83.0	65.7	S. E.	.00	Rain fell, 1.
21	29.925	81.7	71.7	East.	.00	Number of Cloudy Days on which
22	.....	....	....	East.	.00	Rain fell, 6. Total number of days
23	30.018	83.2	69.7	S. E.	.00	on which rain fell, 18.
24	30.053	82.7	74.7	S. E.	.00	Dates of Lunar Halos, 12th, 13th, 15th.
25	30·031	82 7	69.0	S. W.	.00	
26	30.000	82.5	65.0	East.	.00	
27	30.016	80.0	72.3	North	.00	
28	30.035	81.5	74.7	East.	.00	
29	29.952	82 5	75.3	North	.00	
30	29·791	84.7	62.7	N. E.	.00	
31	29.637	81.2	67.0	N. W.	.00	
Sums	.....	.....	.....	.....	.....	
Means	30.001	81.3	73.5	S. E.	1.48	

COMPARATIVE TEMPERATURE.

1871.....		1876.....	82°.2
1872.....		1877.....	83°.1
1873 .....81°.41		1878.....	83°.5
1874.....83°.9		1879.....	81°.0
1875..... 79°.3		1880.....	81°.3

COMPARATIVE PRECIPITATION

1871.....inches.		1876: 82.2	inches
1872..... "		1877: 83.1	"
1873.81.23 "		1878: 83.5	"
1874.83.9 "		1879: 81.0	"
1875.79.3 "		1880: 81.3	"

W. L. SEWARD,
Pvt. Signal Corps, U. S. A.

Mortality in New Orleans from August 28th, 1880, to September 18th, inclusive.

Week Ending.	Yellow Fever.	Malarial Fever.	Consumption.	Small-pox.	Pneumonia.	Total Mortality.
August 28	0	6	14	0	3	102
September 4	0	11	15	0	3	102
September 11	0	9	16	0	4	90
September 18	0	12	13	0	7	127
.....	.....	.....	.....	.....	.....	.....
Total....	0	38	58	0	17	421

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The Alleged Spontaneous Origin of Yellow Fever on Ships.*

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The power of specific spreading disease-poisons, to resist the destructive influence of time and of other deteriorating agents, and to lie dormant without giving any evidence of their presence, until conditions arise favorable to their action and growth, is well established; while the power of these poisons to develop spontaneously, remains unproved. Advancing knowledge has constantly tended to strengthen confidence in the one power, which has been conclusively proved, and to destroy faith in the other, which finds at the present day less reason for acceptance than ever before.

None the less, there remain many who consider yellow fever a disease so exceptional to all other migratory epidemic diseases, that they believe it to have thousands of spontaneous birth-places, scattered around in one restricted section of the tropical circle of the earth, and especially in those parts of this

*A chapter from the Final Report to the National Board of Health, of the Chairman of the Havana Yellow Fever Commission.

limited region where a few white men may happen to gather together. It is more surprising, that a few physicians are yet left, who vehemently teach that yellow fever is a still more astoundingly exceptional disease, in that, it originates *de novo* in ships, even in no other places; and, in that, this procreative power is enjoyed by only those ships which sail in the special sections, of the earth-encircling ocean, which are for convenience designated the tropical Atlantic, the Gulf of Mexico, etc.,—in other words, only in those very limited sections of the single homogeneous cosmical ocean which washes the very shores where yellow fever habitually prevails. Thus, it is claimed, as a *sine quâ non* for the generation by ships of this so-called "nautical," "oceanic," "pelagic" disease, that these ships must be sailing in about one-fourth part of the oceanic tropical region, for, the other three fourths are mysteriously deprived of this terrific pestilential power. Vessels charged with every variety of cargo, passengers, and crew, with every possible diversity and quantity of filth, and, under these conditions, subjected, for months, even years to an ardent tropical sun,—sail from the east coast of Africa around three-fourths of the globe to the western coast of America, with admitted impunity; but, it is claimed, that if the same vessels, under the same conditions, venture to sail within the remaining limited section of the tropical ocean, great risk is incurred in having yellow fever, destitute of having any ancestry, spawned on board. Surely nothing less than the most absolutely rigid scientific proof can justify belief in a doctrine so marvellous and incredible. On what evidence does such proof depend?

Since the proposition is an affirmative one, one single conclusively proved instance of the spontaneous origin of yellow fever on a ship, would logically force the admission, that the disase *can* thus originate, and would render the citation of numerous instances, even of two, superfluous for any purpose except to demonstrate the frequency of the occurrence. There are numerous reports of single instances of the alleged origin of yellow fever on ships, but to La Roche, the best and the most industrious compiler of yellow fever literature, is due the

largest and most instructive collection of such instances. Subsequent writers have done no more than copy from this compilation extracts, which they claim are "conclusive;" therefore, a brief but adequate note of this alleged conclusive evidence will suffice.

La Roche devotes thirty-six octavo pages (pp. 421–456, v. 2) to this evidence, and cites references to at least eighty instances, which for the most part, occurred many years ago, when medical reports were characterized by even less regard than now to logical essentials. From all the instances referred to, La Roche concluded to select only fifteen of those most conclusive, subsequently admitting, however, that even some of those are not thoroughly conclusive. In only two of the fifteen instances, is the vessel alleged to have originated the disease, without having recently touched at some habitually infected place, or having been infected on some prior occasion. This of itself suffices to arouse incredulity, for is it not extraordinary that, among the thousands of vessels which for so many years have annually traversed the American tropics, La Roche, with his enviable industry, should have failed to collect more than about eighty instances, and of these only two which were not known to have recently communicated with an habitually infected region of country?

The most decisive one of these two instances occurred as long ago as 1799, in the U. S. frigate General Green, while sailing in June from Newport, R. I., to Havana. Dr. Kallock, the reporter and apparently the surgeon on board, designated this outbreak "a malignant disease," and a Dr. Halliday of Havana "identified it as yellow fever," but no good reason is given to induce the belief that these physicians possessed in 1799 that which very surely their successors at the present day do not possess, infallibility in the diagonisis of yellow fever. This frigate is said to have been a new one, but not one word is said as to how many years it had been in service, what ports it had previously visited, what vessels it had been in contact with, what stores, baggage, or persons from infected places may have been on board, or any other word bearing on previous opportunities, which the invisible poison of yellow fever

may have had to steal on board and lurk in a dormant state, until awakened by tropical heat and other requisite conditions. All reference to such opportunities for infection is conveniently omitted; and yet Toner's Table of Yellow Fever Localities in the U. S. records that, in 1798, not less than eleven places in the U. S. from Boston to Charleston, including places of such importance, to a U. S. man-of-war at Newport, as Boston, New York, Philadelphia, Baltimore, Norfolk, and three places in Connecticut, were infected by yellow fever; and, that in the very year 1799 not less than seven places, from New York to Charleston were also infected. Is not this ample proof that there were abundant opportunities for the introduction of infected stores, baggage, etc., on board the General Green? The facts in the case suffice to prove that uncertainty as to the diagonisis, and, above all, the negligence and inadequacy in reporting details essential to the case, render this instance utterly worthless as evidence; it is no more than the direct testimony of one favorable witness never subjected to cross-interrogatories, and, while it would be hooted, as proof, out of any decent court, it merits even less respect in the high court of Science.* Respecting all such reported instances, it should be remembered, that sanitary officers of experience and repute are now often demonstrating, in frequent published reports, the possibility of tracking out communicable diseases, in cases where the ordinary practitioner has declared that no traces existed. It is self-evident that a thoroughly exhaustive investigation cannot be expected from an ordinary and indifferent physician; nor, from a medical officer whose ignorance and negligence was very probably responsible for the presence of the very disease he is charged to investigate; nor, least of all, from those whose theories convince them that no investigation is necessary, since spontaneous origin readidly explains everything, and conveniently dispenses with a labor, which not infrequently taxes to the utmost all the knowledge of an able physician,

* I have been unable to consult the original reports of Dr. Kallock, and of Dr. Halliday. Dr. Monette, referring to them in 1842, stated that not one death occurred on the General Green until after arrival at Havana, *where* "the leaven of infection was superadded" to existing unfavorable conditions, *when* "several cases began to assume symptoms of yellow fever."

united with the patience, perseverance and tact of a skillful police-detective.

The second instance cited of alleged spontaneous origin occurring on a vessel, not reported to have recently touched at an habitually infected port, is subject to all of the preceding criticisms. Respecting all essential particulars which concern previous opportunities to become infected, not one word is said except as follows: "In 1799, the sloop Mary was sent into Philadelphia, as a prize to the ship of war Ganges. She was not from a sickly port, and at the period of her arrival there was no one sick on board." It seems incredible, but it is true, that it is not deemed necessary respecting this "conclusive" instance, to say one word as to the history and condition of the Ganges, any more than of the previous history of the Mary.

In all of LaRoche's remaining thirteen instances, alleged to be "conclusive," the vessels had touched at habitually infected shores, which, however, are reported with a reckless audacity, offspring of credulity, to have been free from yellow fever at the time when visited by the vessels, found subsequently infected. Three instances, among the fourteen, of this credulous audacity, will suffice. Yellow fever is alleged to have originated spontaneously on the United States Ship Hornet, in September, 1828, when anchored three miles from Vera Cruz, where, as is reported, yellow fever did not prevail; yet, whoever will examine Bouffier's statistics (pp. 11—14) of the civil hospital of Vera Cruz, will find that, during 1822—36, there were more cases in this hospital in 1828, than in any other except two of these fifteen years, and that there were cases and deaths by yellow fever in every month of the year 1828. Two other vessels, which originated yellow fever on board, both in 1822, and after visiting Havana, were the United States man-of-war Macedonia, which is cited as particularly "*deserving our serious consideration*," and the United States brig Enterprise. To the details in these instances, it is gravely appended, "there was, as we have seen, no yellow fever at the time in the city or port of Havana, and the same fact has come to my knowledge through other channels." Cuban authorities tes-

tify most positively that yellow fever has annually prevailed in Havana, since 1761; the evidence of its monthly prevalence throughout every succeeding year increases from 1805 to the present day; and during this very year, 1822, Dr. J. F. DeMadrid, of Havana, delivered a public address in this city respecting the constant prevalence of "epidemic yellow fever," while Codinach and Maher testify to the same effect (see chapter XVII). In spite of this, we are required to credit "my knowledge through other channels," that after "the 20th of June" and "in the summer of 1822" there was no yellow fever in Havana! Is it not courtesy to designate such statements reckless audacity?

Neither the remaining eleven instances of La Roche, nor those of others, present any stronger evidence than do the four instances above cited in proof of a doctrine, which without the most conclusive proof, is, with our present knowledge of disease-poisons, totally incredible. Manifestly, easy credence has been given to those who deserve very little, namely, to residents of an habitually infected place, when reporting that said place is, at some specified time, no longer infected. Few residents are well informed respecting the presence of diseases, and often falsify unintentionally; self-interest prompts all commercial communities to suppress information concerning communicable diseases, and if these habitually prevail, an indifference to them grows up which induces those exposed to ignore them and no longer to appreciate their importance. For such reasons the whole truth is rarely discoverable, except by the thorough investigation of a competent and authorized sanitary officer. In Cuba, numerous respectable witnesses can readily be found, who will testify that yellow fever does not exist in localities, where proper inspection will readily disclose it. These witnesses may be found among the best citizens, among physicians, among consuls, and among even commanding generals of the very locality.

The ill-founded belief in the origin of yellow fever in ships is sustained by two great errors, disbelief in the dormant vitality of the poison and easy credence in evidence tending

to prove no opportunities of introducing the poison. The last error has in numerous instances been due to misinformation received at a port respecting the presence there of the poison; and, it is, therefore, deemed important to teach some practical lessons respecting this misinformation. From many examples, four within my own experience, and respecting the principal ports of Cuba will be selected; and, it is important to remember, that I, while in Cuba, was supported by the whole authority of the government of the United States, and also that of Cuba, and was therefore less exposed than even medical officers, much less ordinary civilians, to sources of error.

In one instance a consular officer reported officially in writing that there was *no yellow fever* at his post. I did not believe it, and therefore required him to specify whether there were or were not *any cases*, if so, how many, etc. His reply was that there were *the usual number* of cases of "the yellow fever endemic," but that he had supposed the inquiry referred solely to "epidemic yellow fever," which, he repeated, did not exist. Farther investigation developed the fact that, in this large town, there were less than 100 susceptible persons out of which to manufacture an epidemic. A U. S. consul at another port officially reported the entire absence of yellow fever, and other "reliable" persons confirmed this evidence. Fortunately the first physician at this port happened to be a friend, and on visiting him, he detailed four cases within his own knowledge, together with the information that the town had suffered so severely a few years precedingly, that very few susceptible inhabitants were left. In a third instance, the commanding general at a very important post, personally assured me, one morning, that yellow fever did not prevail, and that in all there had been only two or three cases; he, at the same time furnished every facility to test his correctness, and before the day had closed, one of his own army surgeons had given me a written list of a number of cases, and I had inspected in the hospital five certificates of death, and there seen more cases present than the general had reported to have occurred during the whole season. He was as evidently misinformed as he was not untruthful, but he justified me in reporting to some such effect, as that "yellow

fever does not prevail this year at———, as I am assured by the very highest authority;" if such a report had been written, and assuredly it was not, a gross falsehood would have been taught. In a fourth instance, two resident physicians assured me there was no yellow fever at their town, but, subsequently, two of their colleagues detailed several cases which had occurred in their practice. Now, let it be observed, that in not one of these four instances was there the least reason to suspect intentional falsehood.

Experience, in places habitually infected by yellow fever, abundantly teaches, that easy credence is not to be given evidence to the effect, that the disease has ceased to prevail, or has failed to reappear at the usual season, unless this evidence is derived from the highest sanitary officer in the place, and that even he should not be fully trusted, unless it be known, that he is not only competent and trustworthy, but also that he is officially given ample opportunities to know whereof he testifies. Farther, even in the event that there is not, at a given time, one single case of yellow fever in an habitually infected place, this is not proof that the poison may not be abundantly present, and prepared, if subjected to favorable conditions, to demonstrate its presence with conclusive fatality on those susceptible to it. At the close of every epidemic some of the unacclimated, who have been constantly exposed, continue to escape, while others, recently arrived, succumb; in this fact of common experience is a proof, additional to others unnecessary here to repeat, that the poison may be present, yet fail to disclose any evidence thereof.

Finally, respecting the evidence in favor of the origin of yellow fever in ships, the eminent teacher, Prof. Haenisch, declares (p. 491, v. i., Ziemssen's Cyclop.) that "yellow fever has never yet been observed on a ship, which has not, in some way, come into communication with the land or with some other ship, where the disease already prevailed;" and, that distinguished scholar, Prof. Auguste Hirsch, than whom there is probably no man more familiar with the literature of yellow fever, wisely and emphatically writes as follows: "Observations teach that ships free from yellow fever acquire the

disease only by direct or indirect communication with infected ships or places; there does not occur, in the entire literature of yellow fever, one single trustworthy fact respecting the occurrence of the disease on any ship sailing or anchored within the yellow fever zone, except under the above named conditions." "Reports recounting the occurrence of the disease on ships without direct or indirect communication with infected ships or harbors, are not deserving of the slightest confidence." (Deutsche viertel jahrsschrift, pp. 353-373, Viertor Band, 1872.)

Having shown how inconclusive is the evidence in favor of the ship origin of yellow fever, it is necessary now to record the evidence against such an origin.

The first fact of importance is, that it would be difficult, if not impossible, to cite an instance among the world-renowned contemporary authorities in medicine who support the doctrine of the spontaneous origin of yellow fever anywhere, much less on ships. While most of these have no personal experience with the disease, it is as strikingly true that they are thoroughly familiar with the published evidence, and that they are most competent to form, and most disinterested in forming, correct conclusions therefrom. The unanimity of their conclusion against the local origin of yellow fever demonstrates the weakness, either of the evidence favorable thereto, or of those who present it. But, apart from this and other general considerations which have been presented, the special evidence of those having greatest personal experince with vessels frequenting infected ports is extremely instructive and decisive. It is necessary to introduce this special evidence with several general observations.

In the first place none of the pertinent evidence pro or con has been, nor will it be suppressed, since the triumph of truth, and not of any man's doctrine, is alone sought for. In the next place, the doctrine now treated of, is, as will be seen, a very old one, and the evidence to be presented is derived from witnesses who, because of their familiarity with this doctrine, have examined the facts bearing upon it with critical acute-

ness; and this has been done in comparatively recent times, so that the facts on which the conclusion is based could in some measure be tested, as cannot be the case with antiquated reports, especially with those by reporters who manifestly failed to appreciate the premises necessary to their conclusion, as is well illustrated by the inconsequent and illogical report of the above cited cases of the frigate General Greene. In the last place, it is requisite that the medical, as well as the unprofessional reader, should be impressed with the following obvious facts: men who have studied a disease in one place only, have not enjoyed as good opportunities as those who have studied it in many places; practitioners of medicine, obtaining their livelihood by their skill exclusively in the cure of disease, are by no means necessarily well informed respecting its causation and prevention, and therefore far less deference is due to their authority than is due to that of those physicians who have made these their special study: and those medical men who have had most experience with infected vessels are assuredly the best witnesses respecting this subject. For these reasons, consuls, sanitary officers, and naval surgeons, on duty at infected ports, and especially those among them, who have been officially charged with the responsibility of marine sanitation in ports infected by yellow fever, are of all other witnesses, those best entitled to confidence. Of all such witnesses, none deserve more respect than the French, for the reasons, that the colonies of France in tropical America and Africa have long presented unsurpassed opportunities; and no nation has had, for so long a time, a sanitary organization, served by medical officers, competent to utilize their opportunities, and stationed where these were abundant. Their evidence is emphatic and unanimous.

The first witness to be presented is the only antiquated one, and he is summoned chiefly to prove the antiquity of the theory of the ship origin of yellow fever; almost all other witnesses are living men of distinction at the present day.

Kéraudren, "chief physician of the French navy, and Inspector General of the marine sanitary service," wrote in 1823 (pp. 36, 29, of his Report on Yellow Fever observed in the An-

tilles on the Vessels of the King), as follows: "It is constantly observed that vessels, anchored at some distance from the shore, and whose crews avoid communicating with the land, have escaped yellow fever solely by this precaution." "There are those who pretend that yellow fever can develop spontaneously on a ship at sea. By spontaneous development they mean, without doubt, the appearance of the disease without previous communication with the land or with any other vessel which could transmit the disease, otherwise there would be nothing special in the case. Several vessels are cited, on board of which yellow fever appeared at sea; but in verifying the facts, it was seen that these vessels had previously been at ports subject to the disease. Such a number of ships traverse the tropics, that if yellow fever could develop spontaneously, there would assuredly be a great many examples!"

Mêlier, Inspector General of the sanitary service of France and the author of the ablest special report on yellow fever ever yet published by a sanitary officer, wrote in 1863 (p. 75, of the 26th vol. of the "Memoirs of the Imperial Academy of Medicine), as follows: "Whatever may be the nature of the producing cause of yellow fever,—whether miasm or germ, whether cryptogam or infusoria,—one thing appears certain, *that the ship is charged with it at the place of departure*, and that, thus introduced into the ship, it is preserved, probably developed, and concentrated during the voyage, that it is apt to remain, more or less latent while shut up, to reveal itself, sometimes during the voyage, but especially on arrival, when the poison is set free by the discharge of cargo."

Dr. A. F. Dutroulau, "Premier Médecin en Chef de la Marine," an officer, whose unusal ability is proved by his publications, and whose high authority is deferred to by all his associates, had more than twenty years personal experience, chiefly in Martinique, with yellow fever, under circumstances peculiarly favorable for the observation of infected ships, and in 1868, published in his "Traite des Maladies des Européans dans les Pays Chauds," the final results of an experience

which dated from 1832. His evidence is as follows:* Creditable admission is made (pp. 361—2), that, since 1832 larger experience had resulted in his case, as in that of so many others, in forcing him to modify his earlier views respecting some of the problems of yellow fever.

Having failed to find evidence of personal contagion, he, in 1842 so published, and he was manifestly then disposed to favor the local origin of the disease (p. 436.) "But, I had my doubts; for, I had been struck with the conduct of the epidemic on board of ships stationed in the Antilles during this epoch [1839–1842.] To enlighten my doubts, I made an investigation, based on the reports made during this time by the chief naval surgeons, and arrived at the conclusions, published in the Gazette Medicale, 1851; First, that the yellow fever had never declared itself spontaneously *one single time* on board of the numerous vessels which had been attacked by the epidemic; and that, since vessels are not attacked until after some sojourn in infected harbors, there was reason to believe that a ship does not, independent of localities, enclose within itself the producing cause of yellow fever."

"The same investigation led to the same result in respect to all men-of-war which campaigned or were stationed at Guyana, and in the sea of the Antilles from 1850-1857. On *not a single one* was the disease seen to declare itself spontaneously, and before anchoring in an infected harbor; most of them were attacked during their sojourn, or some time after departure; some, more seriously invaded, served as agents for transmitting the poison from one point to another, and these facts, to which attention was awakened, made, on this occasion, such an impression on everybody, that importation remained no longer doubtful to any person." (pp. 436, 437.) "Ships traverse all parts of the tropical seas without any detriment, provided that they do not touch at unhealthy lands." (p. 173.) On pages 425,-6-,

* The facts, stated in the Preliminary Report respecting the evidence of Dutroulau, have been publicly questioned; hence, literal translations and references thereto are now given with care, in order that any reader, who may have been induced to suspect me capable of misrepresenting any authority cited by me, may be enabled to determine readily who has been guilty of an act so culpable. It will be found that the evidence is even more precise and emphatic than was represented.

7, Dutroulau gives the following evidence : " In infected places ships receive also their epidemics. Among those, in great number, which, during this last period, have been invaded at Cayenne, and at the Antilles, there was *not a single one* whereon the disease declared itself spontaneously. The opinion of the physicians in our marine, as expressed in their official reports is *unanimous* on this point, and, as for me, who have had even to prove the erroneous appreciation, of the sanitary condition of a port, formed by physicians who pass a little time there during an epidemic repose, *I know* what it is necessary to think about assertions based on absence of yellow fever on land, and what to conclude about the spontaneous development of the disease on board. As to the epidemic foci of the Gulf of Mexico and of the Great Antilles where the cause of yellow fever is permanent, it is not necessary that there should actually be an epidemic there, in order that ships there sojourning should find the disease breaking out among the crew. The explanations to which those, who believe in the spontaneous generation of yellow fever on ships, are forced to resort, suffice by themselves for *the rejection* of this doctrine ; explanations, which consist in attributing the primary cause of the disease, at one time to the nature of the wood of construction, at another to emanations from the organic matter accumulated in the bottom of the ship, and, at another, to the fermentative nature of certain kinds of cargo. Why is it that these true causes of general insalubrity have never determined an outbreak of yellow fever during distant East Indian and Chinese voyages, wherein these causes are developed as much as, even more, than elsewhere ?" " If the endemicity and the actual sanitary condition of places visited by vessels be well established (for it is from this cause error generally arises), and if the conduct of the epidemic on board be well known, I do not fear to assert that it is always possible to trace the disease to the primary *influence of places.* This is a truth which dominates the whole etiology of yellow fever, and the *least admissible hypotheses* are in vain substituted to explain, by the spontaneous generation of infected foci born in the ship, the

unquestionable facts of importation, which some refuse to attribute to the transmissibility of the disease by infection coming from sick persons."

Such is the decisive evidence of Dutroulan as given in 1868, in reference to careful observations undertaken as early as 1839. What has been the experience since Dutroulan's report? Cornilliac, a surgeon in the French navy, repeatedly assigned to special duty as sanitary officer for the harbor of Fort de France, Martinque, recorded in 1873 his experience of yellow fever since 1841. His evidence on the present subject is as follows (pp. 757-8, "La Fiévre Jaune á la Martanique"): "It is observable that when vessels arrive from a healthy place at a port where yellow fever prevails, it is only after a certain sojourn in the latter place, and, *when there has been communication with the land*, that the disease breaks out on board." "The immunity which these vessels enjoy during the first days which follow their entrance, an immunity of which the duration—as I was enabled to prove by one year's daily observation of merchantmen,—has been 8, 15, 25, and even 40 days in some cases, and never less than 4 days, teaches a fact sometimes contested, viz., that a ship coming from France *can not be attacked by yellow fever while at sea*, even in a region adjacent to places where yellow fever prevails, and that it is requisite, in order that the disease develop among the crew that the vessel should touch an infected shore."

As recently as 1878, Bérenger Férand, "Medicin en Chef de la Marine," on special sanitary duty in Africa as well as in Martinique, and the author of three able works on yellow fever, has recorded his experience.* His three works contain more than 240 pages on the etiology and prophylaxis alone of yellow fever. Throughout his works he plainly indicates that the doctrine of the spontaneous origin of yellow fever on ships is too untenable to deserve discussion. This is sufficiently indicated on pp. 502, 503 of "La Fiévre Jaune à la Martinique, 1878."

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*La Fiévre Jaune au Sénégal, 1874; La Fiévre Jaune à la Martinique, 1878; La Fiévre (dite) Bilieuse Inflammatoire, 1878.

Dr. Fuzier, a French army surgeon, in high official position during that most favorable period for observation, 1861-1866, when France occupied Mexico, and at that most favorable place for observation, Vera Cruz, denies absolutely the spontaneous origin of yellow fever on ships (p. 463, Dutroulau). The evidence of the best authorities among other nations than the French is, as will now be shown, to the same effect.

Dr. Heinemann, long resident in Vera Cruz, and the able author of the best reports published respecting yellow fever in Mexico, declares (p. 29, of a reprint from the "Archiv. f. Anat. Path. Berlin, 1879), that, "the fact that ships which have no communication with the land remain free from yellow fever, has often been proved at Vera Cruz." Dr. G. S. Culbreth, surgeon U. S. Navy, testifies (p. 178, v. 4, 1879, U. S. Navy Medical Reports), as follows: "It is asserted on good authority, that, no matter how severe the epidemic in the city [Vera Cruz] the disease never develops in the shipping, except in the persons of those who have exposed themselves on shore. Even during the severe epidemic of 1875, when many sick of the disease were daily transported from the castle of San Juan de Ulna, to the city, though passing in close proximity to the shipping, not a case of the disease was developed in the harbor in persons who had not been on shore." Dr. S. T. Trowbridge, U. S. consul at Vera Cruz, and a resident thereof during the past eleven years, reported to me by letters in 1880, as follows: "The castle of San Juan de Ulna, and the city of Vera Cruz are hot beds for yellow fever. A line drawn from the centre of these two points would cross, nearly at right angles, the harbor or roadstead where the shipping is anchored. Captains of vessels who keep their men on board and stay there themselves *never have the yellow fever in their ships.* In all the ships which trade at this port, I have never heard that any of them had given spontaneous origin to the disease. At all times, even when yellow fever prevails epidemically at San Juan de Ulna and in the city, and when communication is kept up between these points directly though the shipping,

this *remains always free* from the disease if the men are kept on board."*

Dr. O. S. Vanderpoel, who was for many years the efficient and distinguished quarantine officer for the port of New York, and who had probably as large experience with infected vessels as any other living man, declared (pp. 262,-3, Trans. Med. Soc'ty, State of New York, 1874), that "the tenacity of the poison in a ship has given argument for the spontaneous generation of yellow fever. But it really serves to prove how tenacious of life the germ is, when in a favorite nidus."

Dr. A. S. Gihon, Surgeon and Medical Inspector, U. S. Navy, has testified (p. 375, v. 4, 1877-8, Trans. Am. Public Health Association), "I desire to put on record the experience, and the opinions based on that experience, of the medical officers of the Navy, which I am here to represent, by the authority of the Surgeon General of the Navy. I believe them to be their unanimous opinions, if there are any dissenters I have never met them: 1. The yellow fever ship is always a foul ship; 2. Foul ships, while often generating by their filth other endemic diseases, *have never developed yellow fever de novo.*"

Those who will read the admirable report of yellow fever in Jamaica, by Dr. Donnet, Deputy Inspector General of the British Navy, published in the "Health Report of the British Navy for 1867," will find that he gives no countenance to the spontaneous origin of yellow fever, and on pp. 113, 123 of this same "Health Report," it is reported as to the "North American and West India Station," that of a fleet of twenty-five vessels, eight became infected with yellow fever, and that not only in these, but in all vessels infected on this station during the past seven years, as observed by the reporting surgeons, the disease was easily traced to infected places on land.

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*The fortress, San Juan de Ulna, is built on a reef opposite Vera Cruz, and the distance from shore to shore is about 3100 feet. The anchorage ground lies between. The water front of the fortress measures about 500 feet, and of the city from one to one and a half miles. The anchorage ground is 450 to 600 feet wide, and about three-quarters of a mile long, and the centre thereof is some 800 feet from the fortress, and of course, much farther from the city. The distance at which vessels anchor from the shore, the free exposure of the roadstead to the winds, and the less communication with the land, are probably the causes why vessels at Vera Cruz are much less frequently infected than at Havana. Apparently, vessels subjected to proper precautions never become infected at Vera Cruz.

Aitken (p. 440, v. i. of the second American edition of Aitken's Practice, 1868), referring to the report of the infected "Icarus," as reported by its surgeon, Dr. Macdonald, F. R. S., states that he thereby proves that, "as with typhus and and typhoid fevers, so with yellow fever, the doctrine of its spontaneous origin can have no foundation to satisfy the rational mind."

It would be a work of supererogation to cite the numerous illustrious British authorities to the same effect.

In addition to other evidence, it is a fact of very significant importance, that the owners, agents and captains of vessels engaged in constant voyages within the region frequented by yellow fever, have no fear of the disease, except when touching at infected ports, and even at most of these feel secure, provided they can succeed, as all strive to do, in keeping their men from visiting the shore. Thus, the ordinary daily experience (extending through centuries) of non-professional men has taught them the useful practical lesson, that they need have no fear of the spontaneous generation of yellow fever in ships.

While no one was seen or heard of in Cuba, who advocated this doctrine, many eminent men, some of them physicians, were found, who, as will be seen in the report of the distinguished Cuban civil engineer, Col. Albéar (Chapt. XXII of my Final Report), were converts to an offshoot of this doctrine, in as much as they believed that yellow fever in Havana was fostered more particularly in the harbor, especially in the foul, offensive water thereof. This belief is termed an offshoot of the old doctrine, because a harbor is a mere offshoot of the ocean. Whether yellow fever be an "oceanic" disease, or a disease of harbors, in either case, there is attributed to the sea-water, enclosed within certain terrene boundaries, an influence superior to that of the land forming said boundaries. If any such predmoinant influence is exercised, this ought to be manifest irrespective of the distance from the land, and outbreaks of yellow fever, on ships, very surely ought not to increase in frequency with diminution of the distance from the land. Should facts demonstrate that the risks of infection incurred by vessels always decreased with their distance from, and

increased with their proximity to the shore, no doubt could remain that the infecting poison was located on the shore, and neither in nor upon the water. Special investigations, prompted by these views, were undertaken in Havana, and the results will now be stated.

Dr. DeCaneda, a distinguished medical officer of the Spanish navy, long stationed in Havana, and the President of the Spanish Yellow Fever Commission, incidentally wrote, August, 1879, in an interesting report, not on this special subject: "It is frequently observed that the first cases on board ships of the Spanish squadron are of those persons whose duty calls them oftenest to the shore."* Dr. DeCaneda appointed Surgeons Soler, Medina and San Roman from the naval sanitary corps at Havana, as a special commission to report on the questions propounded by Dr. Chaillé, President of the United States Commission. Their valuable report contains the following: This commission "is of the opinion that of the individuals of the navy, stationed in Havana, those most liable to contract yellow fever are those who inhabit the arsenal, and who frequent the wharves,"—"the further the vessels are anchored from the wharves the less their danger of being attacked by yellow fever;" and the members regret they have not sufficient time to collect statistical facts in detail "to demonstrate beyond question the truths stated, and derived from their personal experience and judgment."

Fortunately that able and zealous officer of the United States, Dr. D. M. Burgess, who had been earlier notified of the report desired by this commission, was enabled to collect statistical facts in detail and to present a very valuable tabular statement of the facts. The interesting letter which accompanies the table instructively summarizes the resnlts and will be presented in full, prior to the table, after one necessary explanation. Dr. Burgess as well as the United States Commission, designated a vessel having one or more cases of yel-

* Dr. DeCaneda having been subsequently solicited to state more explicitly "what was the experience of the medical corps of the Spanish navy, respecting the spontaneous origin of yellow fever on ships." replied, from Havana, August 2nd, 1880, as follows: "For thirty years I have been on duty in the Spanish navy, and during this long period, I have never seen a single case of this disease appear on board a vessel unless the vessel had either touched at, or had received on board cargo or some materials from some infected place. In my opinion, yellow fever cannot originate spontaneously."

low fever on board "infected," but both parties were well aware that while such a vessel should be regarded in practice as infected, yet it cannot, with rigid scientific accuracy be so proved, unless cases have developed on board within the time —say six days—since those attacked had opportunity to become infected by some place, thing, or person outside the vessel.

"No. 2 TACON STREET, HAVANA, CUBA, October 4, 1879.

"STANFORD E. CHAILLÉ, M. D.,

" *President of the Havana Yellow Fever Commission, etc.,*

"*Dear Sir:*—Your communication soliciting answers to the following questions in regard to the infection of vessels by yellow fever, while lying in the harbor of Havana, is received. In reply I would say that since definite statistical data are very much wanting on this subject, more credence is asked for personal experience and observation than would be otherwise desirable.

"First question: 'Which vessels are more apt to be infected, those at wharves or those at anchor?'

"Twelve years of constant professional intercourse with, and observation of shipping while lying in this harbor, convince me beyond all question that those vessels which lie at wharves suffer incomparably the most. Even in winter, when no cases of the disease can be found on vessels anchored in the open bay, and which do not permit their crews to go ashore, it is not at all unusual to find that vessels lying at wharves are invaded by the disease. In the summer months vessels which discharge at wharves nearly all become infected, as a reference to the facts relating to the infection of the vessels in this harbor, recorded in the accompanying table, will verify. In this, it will be seen, that of thirty-one vessels, which discharge at wharves during the summer months of July, August, and September, 1879, twenty-eight became infected, only three escaping. One of the latter should be thrown out of the calculation, as its whole crew were acclimated. Thus it will be seen that only one vessel in fifteen at the wharves during these three months escaped infection.

"Second question. "Which vessels are more apt to be infected, those at anchor near the shore or those more distant?"

"All of my observations, as well as the facts recorded in the accompanying table, sustain me in the assertion that the liability to infection in this harbor is in an inverse ratio to the distance at which a vessel lies from wharves and habitations. It will be seen in the table that out of nine vessels lying at a short distance from the wharves five became infected, or a little more than 50 per cent.; while of eleven vessels which lay at a greater distance out in the open bay only two became infected, or not quite 20 per cent. One of these vessels had a crew of twenty-two unacclimated persons, only two of whom were attacked, one being the captain who frequented the shore, and the other the steward, who never went ashore. The other one of the two vessels had a crew of twenty-eight unacclimated persons, and none went ashore except the captain; two had yellow fever.

"Attention is called to three vessels, viz: the Antonio Sala, the Skerryrore, and the Lisbon, which entered this harbor on the same day. The first two anchored, discharged and loaded in the open bay, and on the nineteenth and fifteenth day afterwards sailed away without becoming infected. The Lisbon went to the wharf called San Francisco to discharge, and three days afterwards began to have some cases of yellow fever on board, and soon all on board, eight in number, had the disease severely. This is a striking instance of the difference in the chances of infection, when making comparison between the wharves and the open bay.

"Third Question. 'Which vessels are more apt to be infected, those at anchor, near to Havana, Regla, Casa Blanca [centre of population], or those at anchor equally near the shore, but more distant from habitations?'

"I am laboring to secure more definite data in regard to these points, but have no hesitation in saying that the nearer a vessel is to wharves and to habitations, the more it is exposed to infection. Thus, it has been shown, that vessels are far less likely to become infected in the open bay, distant from wharves and habitations; but it should be remembered that one strong element in causing this comparative exemption is undoubtedly due to the limited intercourse which the crews of vessels so situated are permitted to have with the shore.

"Much and long continued observation, with statistical records, are very desirable on all of these points, never forgetting to note the number of acclimated and of unacclimated persons aboard of each vessel.

"Very respectfully, yours,

"DANIEL M. BURGESS, M. D.,

"Sanitary and Quarantine Inspector at Havana of the United States National Board of Health."

TABLE No. 12.

Statement of all foreign vessels entering and lying in the Harbor of Havana more than six days, during the months of July, August and September, 1879, and statement of relative infection with regard to their anchorage.

Nationality.	Class.	Name.	Date of Entrance 1879.	Time in Harbor. Days.	LOCATION IN HARBOR.						REMARKS.
					Wharf.		Short Distance from Wharf.		Open Bay.		
					Infected	Not Infected	Infected	Not Infected	Infected	Not Infected	
British	Bark.	Enchanter	July 1	25	Yes						
American	Brig.	Sparkling Water	" 1	23	Yes						
British	"	Five Brothers	" 1	29	Yes						
"	Bark.	Madras	" 2	65			Yes				Near "Muelle Wharf de Feliciano"
American	"	Norton Stover	" 2	25	Yes						
"	Schr.	T. H. Lancaster	" 2	31	Yes						
British	Stmr.	Alnivick Castle	" 2	18					Yes		No one permitted ashore but capt:—crew 28 persons, unacclimated, 2 had yellow fever.
American	Brig.	David Owen	" 3	30	Yes						
"	Schr.	Theresa, G	" 4	9						No.	
British	Bark.	Troas	" 11	20	Yes						
"	"	Troch Rague	" 14	41			Yes				Near "Muelle de Feliciano."
"	"	Caspian	" 15	25	Yes						
American	Schr.	Day Break	" 16	17			Yes				300 feet from wharf from Ponton
"	"	Etta A Simpson	" 18	22	Yes						
"	Bark.	L. T. Stocker	" 20	37	Yes						Discharged at "Muelle Fellciano."
"	Brig.	Havana	" 21	16	Yes						
"	Bark.	Elba	" 21	19	Yes						
"	"	Devonshire	" 22	39	Yes						
British	"	Alaska	" 23	31	Yes						
American	Schr.	Fanny R. Williams	" 24	25		No.					
"	"	Imogene Diverty	" 25	14	Yes						
British	Bark.	Black Prince	" 27	25	Yes						
American	"	Ann Elizabeth	" 27	43	Yes						
"	Brig.	Agnes Barton	" 30	14						No.	Discharged ice in front of ice-house
"	"	Fanny H. Jennings	" 31	33	Yes						
"	"	Wm. H. Genn	" 31	21	Yes						
"	Schr.	White Wing	" 31	25							
"	Brig.	Ada F. Crosby	Aug. 1	35		No.					Crew all deserted
"	Bark.	Acacia	" 1	25	Yes						Crew composed of colored men'
"	Brig.	Lige Houghton	" 2	42	Yes						Discharged "Muelle Feliciano."
German	"	Carl Graff Attems	" 2	33	Yes						
American	"	Stockton	" 12	39	Yes						
"	"	S. V. Merrick	" 19	33	Yes						
"	"	Clara J. Adam	" 19	36	Yes						
"	"	F. J. Merryman	" 21	40				No.			300 feet from wharf, 2nd from Ponton
"	"	C. C. Robinson	" 21	40		No.					Crew all acclimated
British	Bark.	Prince Rupert	" 21	20					Yes		22 of crew unacclimated, capt. much ashore, dissipated and died of yellow fever–Steward not ashore had Y. F., the only 2 cases.
"	Brig.	Lochiel	" 21	11	Yes						
American	Schr.	Wm. Wilson	" 23	38	Yes						
British	Ship.	Prince Rudolph	" 24	25						No.	
American	Schr.	Theresa G	" 30	12						No	21 persons unacclimated
"	"	Sarah Hall	Sept. 5	19			Yes				200 feet from wharf, near Ponton
"	Bark.	Antonia Sala	" 12	19						No.	
"	"	Lisbon	" 12	19	Yes						
British	"	Scarryrore	" 12	15						No.	
American	Schr.	L. B. Wing	Aug. 18	18				No			300 feet from wharf, near Ponton
"	"	Daybreak	Sept. 16	14			Yes				250 feet from wharf, near Ponton, and crew allowed ashore
"	"	Manantico	" 19	12				No			200 feet from wharf, near Ponton, crew not allowed ashore
British	Brig.	Five Brothers	" 20	10				No.			
American	Schr.	L. M. Knowles	" 20	10						No.	
"	Brig.	Merriwa	" 21	8						No	
"	"	Hyperion	" 24	7						No.	
		Total number of Vessels....52.			28 Total No. of vessels infected at wharves.	3. Total No. of vessels not infected at wharves.	5. Total No. of vessels infected short distance from wharves.	4. Total No. of vessels not infected short distance from wharves.	2. Total No. of vessels infected open Bay.	9. Total No. of vessels not infected open Bay.	

DANIEL M. BURGESS, M. D.,
Sanitary and Quarantine Inspector at Havana of the U. S. National Board of Health.

Dr. Burgess has continued his observations, and has kindly forwarded a tabular statement of 368 additional vessels inspected by him since the date of the preceding report, and to May 1st, 1880, that is, during the seven months, October—April, when the danger of infection is least. Of these 368 vessels, 152 remained in port less than five days, and none were infected. Of the remaining 216 which were anchored in central parts of the open harbor, therefore distant from the shore, and it deserves special notice that not one of these became infected, although 35 of them anchored in the harbor more than 15 days, and several of them for more than 50 days. In addition to these enumerated vessels, none of which were Spanish, Dr. Burgess reports "some Spanish vessels at wharves have suffered from yellow fever during October to May, but I am unable to learn that any of those anchored in the harbor suffered, and I am certain that none of the vessels of the Spanish navy did. While vessels in the open harbor have enjoyed freedom from invasion, certain localities in the city have suffered from yellow fever all the winter."

The remaining 120 vessels were all at the wharves, or within less than 100 feet thereof. 15 of these, that is one in every eight, became infected; eight of them in October and November, and one or more in every one of the seven most favorable months, except February. Dr. Burgess adds: "the shortest time which elapsed between the entrance of any of the 15 vessels and their attack by yellow fever was 7 days, and this occurred in one instance only; all the rest were in port more than 10 days before becoming infected. Eleven of the 15 infected vessels were lying at the wharves of notoriously bad sanitary condition, having sewers emptying under them, etc., and two of said wharves are on either side of the arsenal and of the adjacent military hospital, places always infected. The remaining four were very near to wharves which are peculiarly situated in a nook of the bluff on which fort Cabañas stands, into this nook two sewers from the crowded fort empty, and it is cut off from the winds which might drive away the poison; yellow fever attacked nearly every vessel which anchored in

this nook during the whole summer of 1879, and it was undoubtedly an infected place."

Since the report of the above facts to May 1st, Dr. B. reported August 5th, 1880: "I am confident that not one merchant vessel in this port from May 1st to August 1st, has been invaded by yellow fever, except in case the vessel had been at some wharf. Of the vessels at wharves about twenty have been attacked." All the facts reported by Dr. Burgess conclusively demonstrate that the water in the open harbor of Havana is not, as is there supposed, especially dangerous, and that the danger is confined to the shore. Of the total 420 vessels now reported by name and in detail, 50 have become infected, and all have illustrated that the danger increases with proximity to the shore. During the year which closed on July 1st 1880, more than 500 vessels had been carefully watched, and not one had given rise to even a suspicion that it generated the poison. If vessels are endowed with this marvellous power, where on the globe could they find conditions more favorable to make this power manifest, than in the harbor of Havana? Is the alleged power held in abeyance, as are spiritualistic manifestations, during the time when a competent inspector is on guard?

While all the evidence and all the facts, thus far presented are deemed conclusive against any such incredible generative power, the following facts tend not only to strengthen this conclusion, but also to throw light on the mooted question, what can and should be done to render the harbor of Havana less dangerous.

The town of Sagua, with a population of 18,553, is about ten miles from its roadstead, which is a part of the open sea inclosed by islands, and so shallow that vessels anchor several miles distant from the shore. These vessels very rarely, if ever, become infected. The harbor of Cardenas measures some twelve by eighteen miles; vessels are compelled to anchor from one-half to two miles distant from the shore, and in this harbor also the infection of vessels is exceedingly rare —as was the case during the summer of 1879, when Cardenas

suffered with its severe epidemic. The harbors of Matanzas and of Cienfuegos, elsewhere described, are much less spacious than the two just mentioned, but much more spacious than the harbor of Havana. A much smaller number of vessels are at wharves, a comparatively larger number are anchored at a distance from the shore and from densely inhabited parts of these towns, and these absolutely less numerous vessels are anchored at greater distance from each other than at Havana. It is difficult to escape the conclusion, that it is owing chiefly to these differences, that while vessels at Matanzas and Cienfuegos are much more frequently infected than at Sagua and Cardenas, they are much less frequently infected than in the much smaller harbor of Havana.

These facts are also at variance with the origin of yellow fever on ships, and the above conclusion from these facts justifies the following additional deduction. Since man could not render the harbor of Havana cleaner than are the harbors of Matanzas and Cienfuegos, nor by artificial canals renew the water in the former to the extent that nature renews the water in the two latter harbors, the cleansing of the harbor of Havana and the constant renewal of its water, however desirable, would not prevent the infection of the shipping at this port. The facts now presented, and all others, known to me tend to prove beyond question, that the poison of yellow fever is on the shore, and *not in the water of the harbor.* The conceivable, but in large measure, impracticable remedy, best calculated to diminish those dangers of infection due to any special defects and peculiarities of this harbor, would be to so deepen its shallows and enlarge it, that vessels could anchor at much greater distance from the shore and from each other.

There is a final deduction of much scientific importance derivable from the conclusion that yellow fever never originates on ships. This deduction will be better understood if preceded by the statement, that the facts occurring within an infected place, and bearing upon the questioned transmission of yellow fever, can be as well explained by infection of locality as by infection through the movable things and persons in

such locality; and that therefore these facts as they occur outside of habitually infected localities must be more particularly relied on to solve the question. Now vessels, because of their restricted limits and of their small and more readily observed contents and population, are the places which present the most numerous and favorable opportunities for the solution of all questions which relate to the modes by which the poison is conveyed to such places, as well as from thence to other places, and also to the conditions necessary for the propagation of the poison.

On the proper study of these questions it greatly depends whether our present knowledge of the means to prevent yellow fever is to halt or to advance. Medical men of the greatest ability and scientific zeal are needed to prosecute this study in localities where opportunities constantly abound. If the right men were kept as United States sanitary inspectors in the right places thus to pursue this study, results tending to preserve the health and lives of millions of human beings and to foster the commercial prosperity of many great cities might be confidently expected eventually to ensue.

Finally, while yellow fever never did and never will originate spontaneously on ships, yet, it continued, throughout the long period of time during which ships were the chief vehicles of transportation from infected places, to be, in a certain sense, a "nautical," "oceanic," and "sea-port" disease; but, with the invention of steamboats, it, in the same sense, became a disease of towns on navigable streams, and, with the invention of railroads, it became a disease of inland railroad depots. Hence, though ships continue, for obvious reasons, to be the best carriers of yellow fever, this is no more "a ship disease," than it is a steamboat, or a railroad disease; and no more an "oceanic" disease, than it is a fluvial, riparian or inland disease.

Uterine Cancer, with Report of Four Cases treated by Excision and Cauterization.

(Read before the Orleans Parish Medical Association.)

By E. D. LEWIS, M. D.,

Professor of Obstetrics and Gynecology, Medical Department, University of Louisiana.

The frequency of uterine cancer, the suffering it entails, its repulsive features and fatal tendency, make up a clinical picture painful and sad to witness. Its etiology and pathology it is not proposed here to discuss. Using the term in its broadest sense, and including in its scope the epitheliomata as taught by Waldeyer, it is only intended to review the most accepted measures which have been and are employed for its cure or palliation, with a report of four cases treated by excision and cauterization. The chief methods of treatment may be included under three heads: Firstly, the various caustics actual and potential; of the former, the thermo, galvano and gas cauteries are the chief; of the latter, bromine, chloride of zinc, acetic, chromic and nitric acids, are the principal. Secondly, surgical procedures, total or partial extirpation of the uterus, for the latter of which various instruments are used, according to the fancy and skill of the operator. Thirdly, a combination of the two above methods, excision, followed by cauterization for the more thorough removal of diseased, as well contiguous healthy tissue in a state of irritation.

Of caustics, the chloride of zinc and bromine are the most highly recommended, the latter by the English and Germans. It was first brought into notice by Routh, in 1866, who employed an alcoholic solution of 1 part of bromine to 10 of alcohol to the raw surface after removing the cancer. Wynne Williams recommends a stronger solution of 1 part of bromine to 5 of alcohol. Shroeder regards it as the best of all caustics, exercising a specially destructive action on cancer cells, for which it is to be preferred. Intra-parenchymatous injections of the perchloride of iron were first recommended by Kiwisch, after breaking up the friable mass. The idea was taken up later by Dr. Guichard, who experimented with various caustics,

using a Pravaz syringe with a long nozzle attached. He cites a case of a large fungus growth seated on the posterior lip treated by intra parenchymatous injections of chloride of zinc, 1 part to 5 of water. Five injections were used in two months. The patient had entirely recovered in three months, and continued so when seen a year later. (Traité Elementaire de Chirurgie Gynecologique, by Dr. A. LeBlond.)

Among the earliest methods suggested and practised may be mentioned excision and total extirpation of the uterus. Of the latter method we find it stated (in the Bibliotheque du Medecin Praticien) that Soranus and Tnemison affirm that the uterus can be removed with success. Ambrose Pare relates a case operated in 1875, followed by recovery; an autopsy three months thereafter demonstrating that the uterus had been entirely removed. Gallot brought a uterus to the Medica. Faculty removed from a woman by Marshall, of Strasburg, who survived the operation ten years. In the first half of this century, of twenty cases reported not a permanent cure is substantiated; all dying soon after the operation, excepting a case of Blundel and one of Recamier, who relapsed within a year. More recently extirpation of the entire uterus by a new method was revived by Freund. His wonderful success in the first ten cases, justified the hope that he had found means to obviate much of the danger of this operation, as five of the ten recovered. Since then, during the year 1879, he has operated three times, losing all three cases; and of the five reported by him as cured, two have since died (Am. Jour. Obst., Jan. 1880). A case of Veit relapsed a year afterwards. Of six cases reported by H. Bruntzell after the method of Freund, four died soon after the operation. In the fifth the operation was commenced but not completed from extensive adhesion. The sixth case recovered (Am. Jour. Obst., Oct. 1879). Kooks' of Bonn, reported the successful removal of the entire uterus and ovaries for cancer. Shroeder also reports three cases of successful extirpation, but does not recommend the operation unless the cancer involves the neck and body. Where it is situated above the internal os he prefers Pacan's operation as modified by himself. To this opinion, Freund also

subscribes. The uncertainty of cure, together with the high rate of mortality attending total extirpation, will limit Freund's operation within very narrow bounds if, in fact, it is not abandoned as in the past.

Partial removal or excision, is stated by Baudelscque, to have been first suggested by Lauvariot in 1780. Ossiander, of Goettingen, is credited with nine successful operations in the early part of the 19th century. It was adopted by Dupuytren Recamier and Lisfranc. The latter alleges that he performed the operation 99 times, and in 84 instances with lasting success, a result denied by Pauly, his pupil, who accuses him of exaggerating the number and falsifying the results (West and Duncan, page 414.) In the U. S. it was first performed by Dr. Warren, of Boston, April 14th, 1829, 11 years before its introduction in the mother country by Simpson (Gnecological Trans., vol. 2). More recently the contributions of Byrne, Leon L'Abbe, Shroeder Gillard Thomas, and Simms have given an impulse to treatment by excision, as the results obtained have proved satisfatory. Dr Byrne, of Brooklyn, operates with the galvano cautery, using the loop for amputation of the cervix and knife for the removal of diseased tissue within the cavity. His experience is large. He has performed over a hundred operations for cancerous degeneration of the uterus in almost every stage and variety with remarkable success. A marked alleviation of all the symptoms following, and in many instances a permanent cure. In an interesting paper by Dr. Simms, published in the American Journal of Obst., August, 1879, the author reports several cases of funnel-shaped excision, in which the knife and scissors were used and the disease followed into the body of the uterus. To prevent hemorrhage, the cavity is plugged with cotton moistened in a solution of perchloride of iron. This is removed on the 3d day, and a tampon saturated in a solution of chloride of zinc, 5dr. to ℥i of water, pressed almost dry, substituted. This produces a slough which is thrown off on the 5th or 6th day, leaving a finely, granular, healthy surface. The application causes much burning and excoriations of the vagina and vulva in spite of the liberal use of bi carb. soda. A relation of 4 cases,

the most interesting of 8 treated by after this method, may not prove uninteresting.

Case 1st. Clara ———, a nulliparous mulatto girl, aged twenty, admitted in ward 34, C. H., February, 1878, with a history of irregular hemorrhages and constant sero-sanguinolent discharge which had weakened and incapacitated her from work. Vaginal examination disclosed a large cauliflower mass filling the upper part of the vagina and growing from the anterior lip. The uterus was freely movable. Assisted by Drs. Pratt and Miles, with the patient in the genu-pectoral position, its pedicle was detached with scissors. The cervical cavity was found extensively ulcerated to near the internal os. With Simms' curette the diseased tissue was scraped away, leaving but a shell of the cervix, and with scissors the infra-vaginal portion was trimmed to near the vaginal junction. The cavity was then freely cauterized with fuming nitric acid and dressed with cotton steeped in carbolized glycerine. This patient made a quick recovery without an untoward symptom, and left the hospital two weeks after the operation before cicatrization was complete. She returned to the hospital as an out patient twelve months thereafter. Her general condition was good. She had lived out and worked hard; did not feel sick but sought advice for a return of hemorrhage which had appeared at irregular intervals in the past month. By the touch a superficial epitheliomatous growth was detected encircling the os and invading the fundus of the vagina to a slight extent. A second operation was proposed, but she never returned for treatment.

Case 2d. That of Charity Allen (black), aged 51 years, multipara. She had procidentia with epithelioma of the cervix. The growth was about two inches in diameter, and studded with small horny projections. The discharge was very offensive. There was no infiltration of the cellular tissue, though the disease extended to the vaginal junction. The procidentia was reducible. She was operated under chloroform in December, 1879, Prof. Elliott, Drs. Miles and Rohe assisting. The diseased mass was excised with the knife. A quantity of muco-purulent matter escaped from the cavity in which it had

accumulated owing to the obliteration of the external os. The cavity was very much dilated and the wall thin and flaccid from senile atrophy and pressure.

With scissors the dissection was carried to a quarter of an inch from the fundus, removing as much of the parenchyma as was possible without wounding the bladder or peritoneum. The left Fallopian tube was very much distended and contained the same kind of fluid as filled the uterine cavity. The index finger could readily be passed through its ostium uterinum. A saturated solution of the chloride of zinc was now brushed over the entire surface of the cavity, which was then packed with cotton saturated with glycerine. The procidentia was then reduced and the vagina tamponed. This patient made a rapid recovery without an unpleasant symptom. At the end of a month her general health seemed fully restored, and a slight cotton plug sufficed to maintain the vagina in the pelvis; all discharge had ceased. Examined by the touch a few suspicious nodules were detected in the neighborhood of the cicatrized os which were destroyed with the thermo-cautery button. A few weeks later some small vegetations again appeared and were treated in the same manner. She returned home apparently cured, and has promised to return should any sign of disease reappear. She was under observation altogether three months.

Case 3d. Mrs. E., from Mississippi. She first consulted me in February, 1879, for hemorrhages which had been irregular and profuse for two months past. The cervix was large, but healthy looking; the os patulous, and half an inch within the cervical cavity a fleshy growth, as large as a china berry, projected from to the anterior wall. It resembled a polypus. Seizing it with a small vulsellum its attachment proved too firm to permit of twisting. For better examination the cavity was dilated with tents, and the tumor dissected out with the knife. Subsequently made three applications of fuming nitric acid at intervals of eight days. She then returned to her home apparently cured. The tumor was not examined microscopically, and at the time was regarded as an inflammatory product. Her health was satifactory for several months, but hemor-

rhage returned undermining her strength. In company with her husband she came to New Orleans for treatment in December, 1879. The cervix was found enlarged and tender, the os ragged and patulous, and the cavity roughened and ulcerated. The disease was evidently malignant, in which opinion Professors Richardson and Logan concurred. With the consent of the patient and her husband, excision was practiced under ether. Drs. Miles and Castelanos, and Messrs. Walmsley and Underhill assisting. Simon's scoops were used to remove the friable cancerous tissue, and with scissors and knife as much of the parenchyma was removed as was diseased and healthy issue as was safe for about an inch and a half within the uterus. A cylindrical cavity was the result, with very thin walls, perfectly smooth and uniform in appearance, except at the level of the internal os, at which point a small portion of uterine tissue projected. This was seized and snipped off with scissors. In removing this piece, the peritoneal cavity was opened so as to allow the index finger to pass through it behind the uterus. The cavity was then lightly packed with cotton-wool, moistened in carbolized glycerine. Considerable pain was experienced by the patient for several days, with a slight rise of temperature to 100°, for which opium was freely given. It is likely a localized peritonitis occurred which closed the communication with the peritoneal sack. The cotton plug was removed on the third day, and the uterine cavity cautiously swabbed with carbolized water and the same dressing renewed. These dressings were changed every two days for twelve days. The surface within was then found filled with granulations, which, on the anterior wall were hard and irregular, evidently cancerous. The discharge had become offensive in spite of frequent vaginal injections. To destroy these growths, the cavity was plugged with cotton saturated with a solution of chloride of zinc, 5 dr. to the ounce of water pressed nearly dry. The vagina was plugged with cotton soaked in sweet oil. Not much pain or excoriations of the vigina and vulva followed. The packing was removed on the fourth day with some difficulty from corrugation of the vagina and a carbolized injection used.

The cauterization arrested all offensive discharge for about eight days, when it returned. The zinc was again applied in the same manner. This time it caused considerable pain; and excoriations in the vagina and inner side of the labia which added much to the patient's discomfort, and for which anodyne and emollient applications were used. On the fifth day the cotton plugs were removed. A sharp attack of cellulitis followed this application accompanied with symptoms of infection. She had rigors recurring several times a day and profuse and exhaustive sweats at night. Under the use of opiates, quinine and a supporting treatment these symptoms yielded in time. The original trouble had however made considerable headway. A second operation was proposed, and being accepted, was performed under chloroform on the 3d of March, Dr. Miles and Dr. E. assisting. It consisted in scraping away the fungous granulations with Simon's scoops and thoroughly cauterizing the surface with fuming nitric acid. I came near losing my patient from the effects of chloroform and morphia, of the latter of which she had taken a large dose previous to my visit. The pulse was thready, pupils contracted, and fully an hour elapsed before consciousness returned.

This second operation afforded much relief from pain and from discharge, and on the third day her condition being favorable and her husband being compelled to return to Mississippi, she was allowed to accompany him, every precaution being taken to obviate the fatigue of the journey. Since then her husband has written that her general condition has improved, but that the local disease was progressing rapidly. Such rapid reproduction of cancer after removal I have never witnessed before, and I fear the knife in this case has only stimulated development. Mrs. E. was under observation from December 6th, 1879, to 6th March, 1880.

Case 4th. Myra Adams, colored, aged 35 years, multipara, was admitted in Charity Hospital February 19th, 1880. She had been subject to irregular and profuse hemorrhage and foul discharge for a year past. She was anæmic and emaciated. The vagina was found filled with a fungous growth from the cervix the size of a goose egg. There was some hardening of

the vaginal roof and immobility of the uterus. An operation was decided on for the following day. Assisted by Profs. Logan and Elliott and Dr. Miles, the patient was chloroformed. The fungus was quickly broken up with the fingers and scoops and the cervical cavity, which was found extensively diseased as far as the internal os, also thoroughly scraped. When all of the friable cancer growth had been removed by scooping, the cervix was trimmed with scissors quite to the vaginal junction, and as much of the parenchyma removed with the knife and scissors as appeared diseased or lay contiguous to the mass scraped off. This dissection was carried into the body of the uterus for about half an inch. When completed, the cavity formed could have readily contained a hen egg. There was considerable hemorrhage during the operation which ceased as soon as healthy tissue was reached. The cavity was now filled with pledgets of cotton saturated in a solution of the perchloride of iron, 1 to 5 of water. This was removed on the third day, and the cavity well packed with cotton well moistened in a saturated solution of the chloride of zinc pressed nearly dry. The vagina was then tamponed with cotton soaked in a solution of bi-carbonate of soda. This caustic caused intense pain and excoriations of the vagina and vulva, for which opium had to be used in large and repeated doses. With much difficulty and with much pain to the patient the vaginal plug was removed on the third day. After the fifth day the discharge became offensive and carbolized injections were ordered. On the tenth day, after much opposition from the patient, a digital examination was made. A mass felt detached in the upper part of the vagina was removed and found to be a slough representing a perfect cast of the uterine cavity two inches in length and about a tenth of an inch in thickness, and containing the zinc plugs with which the cavity was filled. With the speculum a healthy, finely granulating surface was observed. This patient left the hospital three days afterwards and eighteen days after the operation, feeling well and free from pain. She has been to see me twice in May, 1880. Her condition had improved to such an extent I did not recognize her. Professors Richard-

son and Logan and Dr. Miles were invited to examine her The uterus was movable, the os flush with the vaginal roof and free from disease. This woman works out by the month, and says she has never felt better in her life. She has promised to report to me every month.

Certainly too short a time has elapsed to predicate a cure in any of the cases reported; nor is it expected in their advanced condition, still, as a paliative measure, prolonging life by restoring strength sapped by hemorrhage, constant discharge, and blood poisoning, it is superior to other methods of treatment, and is attended with no more risk. The tolerance of the uterus in cancer to operative measures is remarkable, at least in my experience, and the improved nutrition, rapid return of strength and health, justifies the risk, and should convince the sceptical. The "cancerous cachexia," remarks Dr. Goodell, "is not a contra indication.....even though there be immobility of the uterus which may be the result of peri uterine inflammation independently of the cancerous affection" (Am. Journal of Obst., 1877). This view is also held by Dr. Byrne, of Brooklyn. He feelingly remarks at the close of an interesting and highly instructive paper upon this subject: "It is neither creditable to our confessedly noble and benevolent calling....nor is it in accordance with the dictates of humanity... not to speak of our duty in the premises....to deny the hopeless victims of this hopeless malady ....a temporary respite from loathsome suffering, because the greater boon of complete restoration cannot be looked for." (Trans. Am. Gynecol. Trans., vol. 1).

On the Use of Ammonia and Strychnia in the Treatment of Pneumonia.

By JOHN DELL' ORTO, M.D.

[Read before the New Orleans Medical and Surgical Association, May 29, 1880.]

I.

From the experimental investigations that have recently been pursued both in Europe and America, it is demonstrated that

the medulla oblongata is the nervo-motor centre which governs the function of respiration, from which (to quote from the excellent book of J. Milner Fothergill, *Antagonism of Medicines*, page 70), "the efferent impulses for setting the muscular "mechanism of respiration into action are discharged. This "centre acts rhythmically at brief intervals of about eighteen "times per minute," just as the cardiac ganglia, which are the nervo-motor centres of circulation, act rhythmically at intervals of about seventy times per minute.

It has also been ascertained, that it is in this centre, the *noeud vital* of Flourens, that the action of breathing takes its origin, not in the peripheral terminations of the vagi in the lungs.

"The respiration," (I continue the quotations from Fothergill, page 98,) "is maintained by the action of the blood on "this respiratory centre....The effect of the blood passing "through it is to excite the discharge which causes the respi-"ratory movement. The more venous the blood, the greater "the activity of this respiratory centre.....it increases the "respiratory impulses and quickens their rhythm....When "oxygen is present in normal amount (page 102) ordinary "respiration is found, when oxygen is present in excess the "respiratory explosion or discharges are arrested and *apnœa* is "induced for a time, until the disappearance of the excess of "oxygen from the blood excites the respiratory impulse; when "oxygen is deficient, *dyspnœa* is induced, the respiratory explo-"sion or discharges are more frequent and more powerful "and extend over the whole muscular area; when oxygen is "entirely absent they cease utterly. Farther than this in "the present state of our knowledge we cannot go, but the "above *résumé* is sufficient to throw a flood of light upon the "action of certain drugs upon the respiration."

After having passed in review the experiments made in the study of the action of these drugs on the medulla oblongata, and their antagonistic relations to each other, Fothergill says:

"It is clear (page 100) that we are already in possession of "*two kinds of* agents.....the knowledge of which ought to be "useful in the treatment of diseases. We may classify these

" agents: 1st, As respiratory depressants, that is those which " paralyze the respiratory centre, either (page 106) acting " upon the nervous system generally, and the rhythmically " discharging centres especially (chloral and opium), or acting " chiefly upon the latter (aconite and calabar bean). 2d, " Respiratory stimulants; that is, those agents which exer- " cise a direct stimulating effect on the respiratory centres, " such as ammonia, strychnia and belladonna."

It is apparent enough that in the treatment of diseases of the respiratory organs, we must resort to these agents. " But," (asks Fothergill, page 113,) " how are we to select our agents? " and by what rules are we to be guided in our selections? " Hitherto empirical experience founded upon the remem- " brance of like or similar cases, has been the sole guide, " because no general principles have been, nor without ex- " perimentation, could have been evolved.....Now, how- " ever, something like principles are beginning to dawn upon " us, and rules will probably before long be formulated which " will guide us in our selection. Careful clinical observation " must succeed experimental research, and the indications fur- " nished by the latter must be worked out carefully and watch- " fully at the bed-side and in the out-patient-rooms.....There " seems every reason to believe, by a careful attention to the " rapidity of respiration, its depth, its character, the agent " may be selected, which will, with fair certainty, relieve the " case in point .....Such is the improvement which is being " furnished to practical medicine by the result of speculative " experimentation.....We already know how to discriminate " the palpitation of muscular failure from the palpitation of " nervous excitement; we know that the first requires digi- " talis, the latter bromide of potassium. So, in a little time, " with a cough, we shall be able to discriminate those forms " depending upon excitement in the centre of the medulla, " requiring respiratory depressants, from those linked with " enfeeblement of these centres needing respiratory stimu- " lants.... ...From our acquaintance of these facts, a most " instructive lesson is to be learned. It is this (page 110): " Whenever the respiration is oppressed and severely taxed,

" as in cases of severe bronchitis or extensive pneumonia, and " still more in œdema of the lungs, sedatives (*respiratory sed-* " *atives*) are not to be exhibited. The sedatives most in use, " and most likely to be selected to give relief, or procure " sleep, when absent, in the above cases, are opium or chloral. " But, if these agents exercise a potent influence over the " cerebro-spinal centres generally, and by arresting their " activity, procure sleep—and this they certainly do—we " must remember that they exert a still more pronounced " power over the rhythmically discharging centres, which pre- " side over the respiration and the circulation; that, in fact, they " kill by their effects on these very centres. The well known " empirical rule not to employ narcotics in such form of sleep- " lessness, is founded upon a painful experience of the dan- " gerous and disastrous consequences of the exhibition of such " agents in cases where the breathing is much oppressed and " failing. How such unfortunate results should ensue becomes " now plain and intelligible enough when experimental inves- " tigation has come to the head of empirical observation, and " pointed out the special action of these two powerful narcotic " agents upon the respiratory centres, and upon other centres, " on whose activity in keeping up the action of the accessory " muscles of respiration, the very existence of the patient de- " pends during dispnœa. If the voluntary efforts to maintain " respiration.....are arrested by sleep, then it becomes em- " inently doubtful whether the activity of the automatic cen- " tres in the medulla can carry on the respiration efficiently or " not. The life of the individual depends upon the energy " with which forcible respiration is maintained, and if these " efforts be arrested by a narcotic, the patient then sleeps, but " it is to be feared that the sleep will be one which knows no " awakening. Under the circumstances.....the administra- " tion of narcotics is very unsafe and should be avoided..... " On the other hand (page 115), there are good *prima facie* " grounds for the resort to agents which will stimulate the " weared centres.

" The utility of ammonia as a respiratory stimulant (p. 117) in " affections of the respiratory organs is a well accepted fact in

" the profession at large. The usefulness of strychnia and " belladonna are comparatively unknown as yet to the profes- " sion, and this is especially true of the strychnia..... The " writer (*Fothergill*) has for sometime past used stychnia sys- " tematically for its effects upon the respiratory centres with " very gratiying and satisfactory results.....In my opinion " (page 107) the rabbits which died with the symptoms of " strychnia poisoning with my experiments, died of expiratory " spasm. It was as if the respiratory centre was thrown into " a state of tetanic spasm and inspiration was no longer possi- " ble....That strychnia (page 65) *in non poisonous doses* should " act as a stimulant....through the nervous centres to the " respiratory muscles, and so affect the respiration beneficially " in many diseases, is a fair induction and a feasible hypoth- " esis."

" The following fact is to the point (page 66) : "

" J. B., age 35, complained much of difficulty of breathing, " with some cough without expectoration. The respirations " could not be noted by the usual plan of laying the hand over " the front of the chest, or simply counting the respiratory " movements, they were too slight to be detected....The " man's face was indicative of the distress he suffered from the " difficulty of breathing. What was to be done for him was " not easy to see, for the respiratory sounds were feeble all " over the chest. and the percussion note dull, and the diag- " nosis arrived at was one of general fibrosis of the lung. It " was impossible to add to the thoracic space, and it was " equally impossible to diminish the excessive connective tis- " sue in the lungs. All that apparently could be done was to " act upon the respiratory centres and stimulate them, just as " digitalis is given to stimulate a feeble heart. Ammonia is " the most powerful means of acting upon the respiration, with " which we are yet acquainted, so five grains of carbonate of " ammonia with fifteen drops of tincture of nux vomica were " prescribed, with the agreeably surprising result, that in a " fortnight the man expressed himself so much relieved in " his breathing that he wished to resume work....At the end " of three months, his respiration, though labored, could be

" counted in his clothes like that of ordinary persons. In this " case, as in many others....improvement in breathing imme- " diately followed the administration of strychnia; this drug " not only enables the patient to breathe more easily, and so " affords relief from suffering, but it also does positive good by " increasing the oxygenation, and by making the respiratory " efforts more powerful and more complete."

" If space permitted," (concludes Fothergill) " details of " cases of acute bronchitis treated successfully by strychnia " when death seemed imminent, could be related."

II.

I was under the impression of these words which seemed to me so wise, as they opened to my mind a new and non empirical field for the treatment of affections of the respiratory organs, when before long the opportunity offered itself to me to try it in two remarkable and typical cases.

Case 1st. G. M., came to my office consultations on the 19th of November, 1879, with the following history:

During the last twelve months, he had been suffering from epigastric pains, increased by food, and accompanied by occasional vomiting, flatulance and loss of appetite. The man was during many years, a driver for a liquor dealing house in this city, and used to drink freely, but he had lately stopped it entirely as he went to work in a tobacco manufactory. He is a native of Spain, age 57, of a good constitution, though rather sallow and worn out from defective digestion, from the continual inhalation of nicotine, and perhaps, from an old syphilitic taint. On careful examination I found enlargement of the liver, swelling of the stomach, with a constant pain at the pit of it, increased by pressure, symptoms which led me to the suspicion of an ulcer of the stomach. While under treatment for this complaint, on the night of the 10th of December, he was suddenly seized with chill and fever and pleuritic pain on the right side of the chest, complicated with a light congestion of the right lung and a great difficulty in respiration.

I applied six cupping-glasses *loco dolenti*, and, as it seemed

to me, that the pain was more of a neuralgic, than inflammatory character, I administered quinine; it was immediately relieved, and in a few days he was able to leave the bed and walk about in the streets.

On the 27th of the same month—it was very chilly and the weather was disagreeable—he had a relapse, but this time with the characteristic symptoms of pleuro-pneumonia of the right side, which caused a fresh congestion in the liver, consequently an enormous increase in the previous chronic enlargement of the same organ, and a continual cough of a catarrhal character, but without expectoration.

I immediately ordered a large blister, and thought of ammonia and strychnia. But before trying these drugs, I wanted to give some expectorant, because I thought I could relieve quicker the catarrh, and the cough. If he had been a younger man, I would have prescribed tartar emectic in large doses, from which I have always obtained good results. But his age, and more especially the morbid condition of the liver and stomach, made me hesitate in the administration of this powerful agent. I limited myself to use that antimonial salt which is acknowledged to be less irritant to the stomach. I mean mineral kermes—a remedy often employed by Trousseau in pneumonia—a six ounces mixture, with six grains of kermes, and a drachm of aqua lauro-cerasi, to be given by tablespoonful every two hours, was ordered. The effect of this medication was really disastrous; it only irritated the stomach, without bringing any relief, and the cough continued to be troublesome and without expectoration.

On the 31st, the condition of the patient was distressing; the pain, dispnœa were so intense, that it was impossible for him to lie down in bed; during three consecutive days and nights he was obliged to sit on a rocking chair, making his condition worse, by catching fresh cold. I thought he could not live until New Year's day.

It was under these circumstances, when I resorted to the prescription of Fothergill, of which I have just spoken, that is, five grains of carbonate of ammonia, fifteen drops of tinc-

ture of nux vomica, with a little water and syrup, to be taken three times a day.

January 1st, 1880. To my surprise, I found the patient lying down quietly in his bed and breathing freely. He had taken three doses of the medicine. The pain had almost disappeared; he had brief intervals of good sleep; the expectoration was easy and abundant, and he felt comfortable and in good humor. I continued the medicament during several days with satisfactory improvement in the disease of the respiratory organs. In the meantime the affection of the stomach was progressing rapidly; the epigastric pain, which had subsided during this pneumonic attack, returned with more severity, presenting a lancinating, cancerous-like character. On the 8th of January, yeasty vomit appeared, accompanied by repeated hemorrhage from the stomach; all kind of food was ejected; general debility soon followed, and after agony of over a week's duration, he died on the night of the 18th. No *post mortem* examination was allowed.

Case 2d. M. Y., a native of Germany, aged 57, a strong and hard-working woman. No constitutional taint; no previous disease of great importance.

Early in January, 1880, she caught cold, but as it seemed not to have interfered much with her general health, nothing was done for it. She has been coughing since.

On the 13th of February she had rigor and fever, with an increase in the intensity of the cough. She kept the bed for several days, took foot-baths, warm drinks, perspired freely, and got a little better, so that on the 16th she was up again attending to her domestic duties. On the evening of the 18th symptoms of more serious character appeared that caused her to send for me. I found her in bed with a high fever, frequent and strong cough, pains and a feeling of oppression all over her chest, injected face, headache, and general anxiety. By these subjective symptoms, the case seemed to be one of acute bronchitis caused by those sudden changes in temperature that often occur in that season of the year. Being myself that evening in a hurry to visit some other grave patients, I had no time to make a thorough examination of the lungs. I post-

poned my final diagnosis until next visit, and prescribed, as a sedative to the circulation, and expectorant, the following mixture: Fol digitalis gr. xx, inf. in aq. fervent. ℥iv, kermes mineral gr. vi, aq. laur. ceras. ℥i, syrup tolu ℥ii—to be taken by table spoonfuls every two hours.

19th The first thing that calls my attention this morning is the character of the sputa. They are rusty, tenacious and difficult to be detached from the bottom of the vase—*crachâts glutineux, ou pneumoniques* of Lænnec.

This makes me suspicious of something more serious than a simple bronchitis. In fact, the physical signs found on percussion and auscultation, indicate plainly a double pneumonia. The area of dullness is confined to the two inferior thirds of both sides of the chest; pneumonic crepitus—*râle crepitant* of Lænnec—is heard distinctly and equally diffused to the corresponding two inferior thirds of both lungs; the respiratory sounds are absent in many points of the affected lungs, proving that there was already a commencement of hepatisation. Strange to say, the general appearance of the patient and the dyspnœa were not in relation to the gravity of these pneumonic symptoms.

The mixture ordered yesterday has made the expectoration easier, but the fever and the general symptoms are the same. I decided to continue the same treatment for two days longer, and so, as in the former case, have occasion to make a comparative experimentation.

21st. Expectoration easy and abundant; sputa always rusty; pneumonic crepitus on a stand-still; complete insomnia during the last forty-eight hours.

Discontinued the mixture and commenced Fothergill's prescription, that is, five grains of carbonate of ammonia and fifteen drops of tincture of nux vomica, three times a day.

22d. The breathing is a great deal better; she had a good rest of three hours sleep.

Continued the medicament during five days, with constant improvement in all the symptoms.

27th. The pneumonic crepitus was diminishing rapidly and the respiratory sound becoming more marked in both lungs. In

order to act upon the bronchial lining and help the expectoration which was very copious, I prescribed cod liver oil.

On the 29th, the woman was convalescing, and on the 8th of March, she had completely recovered, and is now doing perfectly well.

III.—REMARKS.

In bringing these cases before the Association my only object is to show you that the effects of strychnia and ammonia observed in the physiological laboratories have been illustrated in the bedrooms of my patients. In both cases the respiratory movements became more regular after the administration of the first doses of the drugs. It seems that the act of breathing, this nervous factor which plays such an important part in the inflammation of the lungs, has soon come under the control of the remedies through their stimulating action on the medulla oblongata. A general relief was the immediate consequence, followed by rest and sleep, and the improvement so obtained has continued without interruption until the resolution of the inflamed lungs. Although the history of the first case terminates with the death of the patient, I think that I may claim, that as far as the respiratory organs were concerned the result was satisfactory, and most probably a complete cure would have been obtained had it not been for the diseased condition of the stomach and liver.

This is already a great stride toward that scientific exactitude, to which all our studies must aim.

In the meantime the question arises:

Will this treatment, suggested by the eminent English theraputist, be hereafter the only one, that the profession has to follow in every case of pneumonia?

Have we to put aside what has been done by our Fathers in Medicine, from Hippocrates to Rasori, and Laennec? The clinical observations are not numerous enough yet to give to the question an affirmative and definitive answer. Let us try it fairly in a large number of cases, over long periods of time, and record honestly our results, but without forgetting that old latin saying—as each disease may vary in the different

individuals, our treatment has also to vary in the different cases; if thousands be the varieties of the disease, thousands must also be the varieties of the treatment—"*et quoniam variant morbi "variabimus autem, mille mali species, mille et salutis erunt.*"

So it is, gentlemen, with pneumonia. The disease offers in the practice, so many varieties, depending upon age, climate, general constitution of the patient, etc., that it is almost impossible to establish a uniform and constant system of treatment.

You take for instance, the pneumonia of young and healthy men, people, whose constitution has never been vitiated by any hereditary or acquired taint—what Trousseau calls *pneumonie franche, véritable fluxion de poitrine*—the simplest medication sometimes is sufficient to cure this kind of patients —several leeches or cupping-glasses, applied at the chest, a few grains of tartar emetic, a slight purgative, brings the disease to a rapid resolution. The gravest pneumonias, that occur during the vernal equinox among that robust race of men, who live on the mountains of the coldest latitudes, generally yield to blood-letting promptly, and *larga manu* used. While a student, I have seen many such cases recovering in ten or twelve days; field laborers, who were able to resume their work on the fifteenth day, after very severe attacks.

The pneumonia, that we see in warm climates, in swamp-lands, need quite a different treatment. The malarial poison is so often mixed with the other symptoms of the disease, as to constitute the dominant factor, calling for the most prompt and active anti-miasmatic medication.

We have pneumonias complicated with a general scrofulous or syphilitic taint, very often passing to suppuration, or terminating in galloping consumption in spite of the most energetic and specific treatment.

Again, we have pneumonia in infants—what a medical tact, what peculiar, mother-like skill it takes to manage these little patients!—a small blister, a few ounces of syrup of ipecac, the carbonate of ammonia combined with tincture of belladonna, calomel in purgative doses, is the treatment that I use in these cases.

Pneumonia of old people—in which the stimulating medication of Fothergill may perhaps be the best that can be done.

There is a kind of pneumonia described by Récamiér and Trousseau, as ataxic pneumonia, on account of very serious nervous complications, such as delirium, general prostration, etc. Musk in two grains doses, repeated according to circumstances, has proved to be a valuable remedy in the hands of those gentlemen. Perhaps musk is also a respiratory stimulant?

Of the treatment of pneumonia with large quantities of alcohol, as recommended by some authors, I cannot speak, because I never used it, and I must frankly confess, that this practice does not commend itself to my judgment.

I will only ask your indulgence for a few minutes longer to call your attention to the system of Rasori; I mean the use of tartar emetic in large doses of six, eight or ten grains administered in the twenty-four hours, that seems to have become forgotten by the profession in our days.

The following observation, that happened in the commencement of my practice, while I was traveling through Mexico, was a very instructive one for me.

It was late in the evening, many years ago, when I was sent for to see a lady, of about 30 years of age, who was suffering with pneumonia. She was in the sixth day of the disease, and did not have any medical assistance. I am sorry that I did not take any particular notes of the case, but I remember well that I found her in a state of great anxiety and dyspnœa, and that I made a fatal prognosis. Six grains, however, of tartar emetic in six ounces of mixture, were immediately ordered and administered by table spoonfuls every hour. Next morning the change in all the symptoms was really marvelous—all the quantity of emetic had been taken. The woman, who a few hours before was burning with high fever, with quick and strong pulse, with continual and dry cough, was now lying cold, with profuse perspiration, slow and weak pulse, breathing slowly and easily, and expectorating freely. A mixture of kermes and syrup of poligala was then given at longer intervals, and soon the patient recovered.

Facts, like this, are related by hundreds in the classical books of Laennec and Trousseau, proving the positive good always done by this method, certainly due to its prompt and active depressing action on the general circulating system.

Rasori and Tommasini, the heads of the Italian school, used to call this action a counter-stimulant—a word that does not explain anything.

Fothergill classifies tartar emetic among the nauseating expectorants, "which (page 152) depresses the circulation "(and propably the respiration as well), and causes the bron- "chial secretions to be freeer," and with these views I perfectly agree.

Now, after all that has been said, if I had to venture to formulate a treatment in general of pneumonia, I would suggest dividing it into two stages.

Considering the relation that exists between circulation and respiration and the influence that one exerts on the other in health and disease, I would commence by acting directly on the circulating system with those agents that lower the high temperature, and moderate the exaggerated movement of the heart and arteries, so as to relieve as quick as possible the nervo motor centres and the lungs of the excess of blood, which is always very rich in fibrine in pneumonia. Such agents are: venesection in the first twenty-four hours, and whenever we are in presence of persons of strong and sanguine constitution; tartar emetic in more or less large doses, according to the circumstances of the case and the tolerance of the stomach; kermes, highly recommended by Trousseau, hydrocyanic acid, tinctures of aconite, of veratrum viride, of gelsemium.

It becomes the physician to employ judiciously any of these agents that his own study and experience may indicate the best in the first stage.

When this is over and free secretion established, then the stimulant expectorant, as ammonia, belladonna and strychnia may come in, "which," as Fothergill says (page 153), "by "maintaining the flagging respiration often enable the case "where the result is very doubtful to turn the corner successfully."

CORRESPONDENCE.

(From our Boston Correspondent.)

MR. EDITOR—The *Louisville Medical Journal* recently said that a non-professional speaker at the Lexington banquet, who had long served in the Legislature, made the acute remark that one of the reasons why doctors sometimes failed to secure what they wished from the law, was because they did not always agree upon *what* they wished. A better reason for the failure of the recent bill against quacks in this State could not be given. Even those who favored the bill were, many of them, driven to the opposition by the warmly waged objections of the disaffected. When the bill first made its appearance, medical sentiment so generally favored it, that he would have been a bold prophet who prophesied its defeat. Lack of unity killed it. Those who opposed it, those I mean among the fair-minded, saw the necessity of a law against quacks, and if it had been framed according to their ideas, would have favored the defeated bill. But for many reasons which I need not detail, the bill was fought. It missed fire in the Legislature, and for the present, the quacks have the whip-hand. This seems mortifying, but to very many probably is not so much so as would have been the recognition and equality which the opponents of the bill felt would be given to eclectics and homœopaths, in case the bill had passed. The fact is, every regular physician in the State would be glad to see in force a law which would rid us of the incubus of quackery. The defeated bill undoubtedly is an *avant courrier* of one which will not only satisfy the Massachusetts Medical Society, but will settle the fate of Massachusetts medical humbugs and quacks. True, there is a small body of pessimists who, while they are as anxious as the most sanguine to see the quacks driven out, believe at the same time that a medical law against them can be enforced with no more success than the law against the sale of intoxicating drinks. Others, however, believe that what has been done in Illinois can be accomplished equally well in Massachusetts. Hundreds of quacks were sent out of

the western State by its stringent medical law. Sooner or later, a similar law will do as much good for us.

For several years the faculty of the Harvard Medical School have been searching for a site suitable for a new building. At one time it was commonly supposed they had determined to purchase the ground occupied by our old Cochituate reservoir, now long unused, which you may have seen, a rough, massive structure of granite, still standing directly behind our State House. But they have done better. The corporation has secured from the Commonwealth of Massachusetts the westerly half of a square or block on what Bostonians call the "back bay lands." It is bounded by Boylston, Exeter and Dartmouth streets, and a twenty-foot passage-way. This site contains 33,000 square feet, will be very easy of access, and will possess the advantages of abundance of air and light. The building once erected will be an ornamental addition to other fine structures which stand in immediate vicinity, viz: the "new" Old South Church, the Boston Museum of Fine Arts, the building of the Boston Society of Natural History, the Institute of Technology, and last but not least, the superb Trinity Church building. The remaining half of the square has been given by the State to the city of Boston as a site for the proposed new public library building.

The present medical building is close by the Massachusetts General Hospital, but since many clinics are held in the City Hospital Amphitheatre and since ward visits are made by the students at the latter institution, they are obliged to traverse almost the entire width of the city in going from one hospital to the other. Once in the new building and they will be located about midway between one and the other. The Medical Library in Boylston Place, and the Public Library, which contains a valuab.e collection of medical works, will likewise be more accessible. Moreover, when the proposed new bridge over the Charles river is completed, students can more quickly reach the college grounds in Cambridge.

It is supposed that the centennial celebration of the founding of the Medical School (1782), will take place in the new building. It will be worthy of its surroundings, and its ac-

commodations will fully meet the needs of the constantly increasing class which avail themselves of the advantages of this school. No professional department of the University has enjoyed a more prosperous career, than has the medical school. Another important change in the Harvard plan of study has also recently been announced. The present curriculum has had several years of fair trial, and has proved a thorough success. But in spite of the increased amount of time given to the course, it was soon found that three full academic years were insufficient to complete the various courses of instruction. For this reason, the faculty has matured a plan,—the announcement of which you may have seen,—a plan which covers four years, and at present is elective. Matriculates who do not choose to make use of it can take the old three years' course, which has not been altered in any respect. It might have been wiser on the part of the faculty, if the new plan had been announced as obligatory. Such a decision would have met with warm approval, and undoubtedly would have proved its wisdom.

The new plan will go into operation at the beginning of the next session. The arrangement of the examinations has been somewhat widely published. For this reason, I will not repeat it here.

I have been much interested by a case of transfusion, which was performed not far from a summer resort in New Hampshire, at which place I made the valuable acquaintance of the operator, Dr. George B. Twitchell, of Keene. This gentleman is one of the leading surgeons of his State, and although he is almost completely deprived of professional association of every nature, and, like other physicians, who, far removed from hospitals and centres of medical culture, are obliged to rely upon their native good sense, skill, and ingenuity in all emergencies, Dr. Twitchell keeps himself thoroughly informed of all improvements in surgical and medical appliance and remedy, but yet has not always at hand the means of adopting them. But he is the nephew of the once famous Dr. Amos Twitchell, still well remembered by older surgeons, as well as by the middle-aged residents within forty miles of Keene, who

speak of him with affectionate veneration. It was Dr. Amos Twitchell, who, so long ago as October, 1807, *never having heard of the operation*, and one year before Sir Astley Cooper performed it successfully, tied the common carotid in a young man, *with no other assistance than the lad's mother, an aged woman*, the ligature being applied half an inch below the bifurcation. The patient recovered.

While dissecting down to the artery, Dr. Twitchell himself kept the ruptured vessel closed by means of his thumb, meanwhile using his knife and doing his work with one free hand and the disengaged fingers of the other. The case was a gunshot wound in the neck on the right side, with secondary hemorrhage, ten days after the injury. The incident is probably unparalleled, and Twitchell's heroism and skill require no comment.

His pluck and ingenuity have been inherited by his nephew, to whom I have made allusion. In August, of last year, this gentleman, Dr. George B. Twitchell, was called in consultation to see a woman who was dying and nearly dead of progressive anæmia. Her age was forty-five years. The cause of her illness was a severe fall, which injured stomach, bowels, and back, and finally brought on an incessant vomiting which, when Dr. Twitchell saw the patient, had continued five weeks. Everything else having failed to relieve this symptom, and since nothing in the shape of nourishment could be retained, Dr. Twitchell proposed transfusion. No instruments were at hand, and there was no time for ordering them from New York or Boston. Before their arrival the patient would have been dead. Dr. Twitchell had nothing but an old canula, once the property of his uncle, and his pocket case. With these he commenced operations. After much persuasion a son of the patient allowed some eight ounces of blood to be taken from his arm. This was caught in an ordinary basin or bowl which was placed in a larger vessel of warm water, for the purpose of keeping the blood at a proper temperature. Defibrination was accomplished by whipping the blood with a fork. It was then strained through a handkerchief and afterward poured into a common fountain syringe previously warmed and cleansed by hot water. This

completed the primitive apparatus. Failure seemed imminent at the outset, for a fatal syncope threatened to interrupt the operation. Moreover, the emptiness of the veins increased the difficulty of the procedure. The canula in use had no trocars so that dissection was necessary. By this means the vein was lifted, incised and the canula introduced. The hose of the syringe was slipped over the outer end of the canula, and in this simple fashion the blood was transfused. The patient at once whispered that she felt the blood. Through a defect in the canula some of the fluid was lost. Six additional ounces were therefore taken from the son's arm, and this was injected without waste. At the close of the operation the patient's cheeks and lips showed increase of color and her pulse was firmer. Without further detail, which besides is unnecessary, I will merely add that she made a perfect recovery. The case was reported in a letter to the *New York Record* of February 21, 1880, by Dr. S. A. Mason, of New York, whose patient the woman originally was. I have quoted it simply as a fresh illustration, not only of the courage, readiness and skill which reside in the Twitchell blood, but likewise of the truly noble heroism which carried a country surgeon through and over difficulties and obstacles which might well appal his city fellow, who has at hand every aid and abundance of experienced consultants. H. O.

Boston, Sept. 12, 1880.

Current Medical Literature.

SEVENTEENTH CENTURY MEDICINE.

A Review of an Old Book.

By WILLIAM H. MAYS, M.D., San Francisco.

The assertion of the historian Lecky that, up to the beginning of the present century, medicine made less progress than the other sciences, will not be disproved by a search into its history. When learning revived at the Renaissance, medicine

stayed lapsed in inglorious sleep. Its temples remained walled in by gross superstitions, mediæval cobwebs obscured the light, barbaric superstitions choked the growth and development of anything like independent thought within its borders. In an age when "broad-browed Verulam" was inspiring the brain and Shakespeare the heart of mankind throughout immortal time, the highest representatives of medical art were teaching that all the veins in the body arise in the liver, that the arteries convey air, that the heart contains air chambers, that the brain moves up and down with the changes of the moon, that the hair is formed of smoke from the viscera, and other such crudities.

A quaint old black-letter book is before me, from which I will make extracts, as verbatim as possible, showing the condition of our science two centuries and a half ago. The book was presented to Dr. Beverly Cole, of this city, by Mr. Holmes Coote, late surgeon to St. Bartholomew's Hospital. On the title page it is called

The
English-mans
Treasvre.
With the true Anatomie of Man's Body.
Compiled by that excellent Chyrurgion Mr. Thomas Vicary
Esquire, Chyrurgion to King Henry the 8, to King
Edward the 6, to Queene Mary, and to our
late Soveraigne Queene Elizabeth, and
also chiefe Chyrurgion to St.
Bartholomewes Hospitall.
Whereunto are annexed many Secrets appertaining to Chirurgerie, with divers excellent approved Remedies for all
Captaines and Souldiers that travell either by
Water or Land, with Emplaisters
of especiall Cure.
By Willlam Bremer, Practitioner in Physicke and
Chirurgerie.
Printed at London by B. Alsop and T. Fawcett, dwelling in
Grub street neere the lower Pumpe.
1641.

As the authors of this work were evidently men high in the profession, "Mr. Vicary, Esquire," being chief surgeon of St. Bartholomew's, it may be taken as a tolerably faithful reflex of the medical culture of that age. The treatise on anatomy, which forms the first part of the book, is a mixture of fantastic errors and parrot-like repetitions of sayings from Galen and Avicen. Flesh is represented to be "engendered of blood congealed by heate." The "nayles" are "engendred of great earthly smoake or fume resolved through the natural heate of humors," and their purpose is "to claw the body when it needeth," a very necessary purpose in those days perhaps, considering our forefathers' aversion to soap and water. The description

of the brain furnishes some choice reading. The old idea of the duality of our being, the idea that the body is one thing and the spirit inhabiting it another and totally independent entity, of course prevails. "Between the severall divisions of the braine be issues or passages through whom passeth the spirit of life too and fro." This doctrine of the spirit wandering at will around its tenement-house, the body, still holds sway among the generality of people, and it is proving an up-hill fight for science to convince them that mind or spirit is but a property of matter.

Some singular reasons are given for the decussation of the optic nerves.

"And three causes I find why these Nerues are joyned in one before they passe into the Eye; First if it happen that any diseases in one Eye, the other should receiue all the visible spirit that before came to both. The second is, that all things that wee see should not seeme two; for if they had not been joyned together, everything would haue seemed two: as it doth to a Worme and to other Beasts. The third is that the sinew might stay and helpe the other."

Although Harvey promulgated his discovery of the circulation of the blood as early as 1625, we know that it was bitterly opposed for some years afterwards in England, France and Italy, by those surgeons and professors who had been educated in the old belief. Thomas Vicary, our author, was one of these. He admits that blood passes from the liver to the heart, but this is as far as he dare go. The two ventricles he supposes to be full of air, "to abate and temper the great heate that hee (the heart) is in." He also describes a place in the heart where the "spirit of life" originates, a rival to Aristotle's pineal gland.

"The Blood is sent into a Concavity or pit in the midst of the heart, betweene the two Ventricles, and therein it is made hot and pured, and then it passeth into the left Ventricle, and there is ingendred in it a spirit that is cleerer brighter and subtiller than any Corporall or Bodily thing that is ingendred of the foure Elements."

The liver is described as being "boysterous in substance," and "through him passeth all the drosse of the Stomack to the Guts."

"The spleen is the "receptory of the Melancholious superfluities that arise in the Liver."

The kidneys are clothed in a large amount of fat, "because it should receive and temper the heat of the kidneyes which they have of the byting sharpnesse of the water."

Passing to the end of the chapter on anatomy, we find the following dietary laid down:

How a sicke man should Dyet himselfe being Wounded.

A wounded man, or a man sore beaten being sicke, must be kept from Milke, Cheese, Hearbes, Fruites, Women, Garlicke, Onions, Fish, Leekes, Peason, &c. also divers sortes of meate must hee not eate, as Beefe, Water Fowles, Goose or Ducke, nor drinke too much strong wine. But hee may eate Porke, Mutton, Chicken, Henne or Capon.

In the treatment of wounds, the first thing to do is to "wash the Wounds very cleane with Urine." In stitching the edges together, directions are given to "sowe nothing but the Skinne, for otherwise it will cause great paine." "A little of our Balsamo" is then to be applied, and the wound let alone and it will get well, by the grace of God. Stress is laid on the necessity of not meddling with wounds after they are once dressed.

The following savors strongly of Listerism, and shows that there is nothing new under the sun:

A Wound being open or ill-healed, the Patient may be in danger of life *because the winde entreth in and causeth paines and inflammation;* therefore that the wound shall have no detriment, use this remedy. First joyne the parts close together and put therein our Quintessence and lay a cloth wet in our Baulme, and binde it fast *that the ayre come not in, for it is very hurtfull.*

The italics are mine. If good Thomas Vicary could come to life, he would find his doctrines making a stir in the world under the name of antiseptic surgery.

Further on he mentions how he cured "a certaine Spanyard," at Naples, of a wound in the head, by dressing the wound with his balm and keeping it as closely bound as possible. "And so, in fourteene days he was perfectly whole to the greate wonder of a number of Chirurgeons in that city."

Among other methods of treating wounds, it is recommended to apply hogs-dung mingled with sugar; in another place you are told to take a good handful of nettles and bruise them and bind them on. To arrest hemorrhage from a wound, stitch it very close and "strowe thereon the blood of a Man dried and made into a powder." Alum is also to be used for the same purpose. To help the ache of a wound, it is directed to "stampe Fennell with old Swine's greace" and apply it; whether it is the grease or the swine that must be old is left to conjecture.

A treatise on urine follows; not the examination, but the mere inspection of urine. If the treatise is to be relied on, our fathers in medicine ascertained more from a glance at the urine than did the Roman augurs from an examination of the entrails of chickens. Bubbles swimming on the top denote "rawnesse and indigestion in the Head, Belly, Sides, Reynes, and parts thereabouts." Bubbles clinging to the urinal signify the body to be replete with evil humors. A black circle in urine signified mortification. "Urine that hath dreggs in the bottom medled with blood betokeneth death." Several pages are filled with similar auguries to be drawn from the appearance of the urinary secretion.

I will now transcribe a few prescriptions in full, as specimens of the therapeutics of two hundred and sixty years ago:

For a Fellon.

Take Hearbgrare, rusty Bacon, soure leaven, and Snailes with shels on their backes, taking them out of their shells, and beat all these together, and lay it to the Griefe.

For an Ague.

Take Featherfew, Wormewood, and Sorrell, of each a good greate handfull, stampe them and straine them hard, and put thereto as much Sugar in weight as the juyce weigheth, and put them in a strong Glass in a Skillet of warme water the space of four and twenty houres before you give it to the Patient.

An Oyle for the Gowte.

Take me three ounces of Turpentiue, and two ounces of Yellow Brimstone and foure new laide Egges, the Yolkes of them, a quantity of red Nettles, of the tops of the seeds of them. Take me a young Whelpe of an evrage Hound, the fattest you can get; take and scald him and draw out of his Guts as much of the Fat as you can, and rost him, and the Oyle is good for the disease aforesaid. Approved very good, divers times.

The above is delightfully vague. Whether it is the whelp or the hound that must be fat, whether you are to roast the whelp or the fat, and what is to be done with the turpentine and nettles, and other ingredients, are matters left to the imagination of the compounder.

* * * * * *

In taking leave of thee, good Master Vicary, we doe verelie protest that we have spent halfe an houre in goodlie companie. —*San Francisco Western Lancet*, August, 1880.

GELSEMIUM.

If the face is flushed, the eyes bright, the pupils contracted, the temperature elevated, the muscles twitching, and the tongue tremulous, give gelsemium. If the temperature is normal or below, the eyes dull, the pupils dilated, the mind cloudy, the pulse feeble and no nervousness, do not give gelsemium.

Children while suffering from high fever or irritation from any source are especially liable to convulsions. Under such conditions gelsemium is the remedy *par excellence*, as a nerve sedative to lessen the liability to convulsions.

This drug seems to produce such a variety of symptoms shown under different circumstances and recorded by different observers, and is recommended for so many different diseases, that it has not yet been definitely classed; but it so universally allays nervous excitability from whatever cause, that it can very properly be classed, as Binz classes it, with the nervine sedatives.

Knowing the physiological action of gelsemium upon muscular fibres, in September, 1877, I administered it in a case of retention of urine from spasmodic contractions of the mouth of the bladder. The catheter could not be introduced, and chloroform was not at hand. I was then driven to try gelsemium, and, to my surprise, with the happiest results. After a few hours, before I returned with the chloroform, the urine passed off naturally, and by continuing its use a few days the spasms

did not return. I have since seen that others have used it, as I have since done for the same purpose, nearly always obviating the necessity of catheterization under chloroform.

In those after-pains of multiparæ, where the continued tonic pains are due to an irritability of the overwrought nervous system, rather than to a physiological process of subinvolution, gelsemium is a most excellent remedy. I give the tincture in twenty-five-drop doses every hour, and have never failed to sedate the hyperirritability of the pelvic nervous system which generally exists during subinvolution. According to my notebook, this treatment has been almost immediately successful in forty-six cases.

The pains of dysmenorrhœa and the "nagging" pains of the first stage of labor are greatly alleviated by it.

Neuralgia of the fifth nerve from temporary eccentric irritations not instances of tic douloureux, intercostal neuralgia, and myalgia are frequently cured by this agent when largely administered.

In cases of neuralgia of the trigeminus, Dr. Massini gives twenty minims of the tincture every half hour for three or four doses, and he finds that the first dose usually affords relief, and that the pain rapidly subsides after a second or third dose has been taken. He has never found it necessary to exceed sixty-minim doses, and only in one case did this quantity produce any unpleasant head symptoms. The cases in which the remedy produces most benefit are those of simple rheumatic neuralgia of the alveolar branches of the trigeminus. In these it rarely fails. It also sometimes relieves the pain remaining after the stopping of a carious tooth.

In diseases of the respiratory organs characterized by irritation, having its seat or origin in the pulmonary tissues—such, for instance, as hectic—gelsemium has acted well when all the favorite remedies for that symptomatic trouble have failed.

Gelsemium is of great service in convulsive or spasmodic cough, whooping-cough, reflex cough from irritation, hysterical cough, and in some cases of spasmodic asthma, spasmodic muscular cramps, and indeed in all troubles of a spasmodic nature that are due to nervous irritations, producing some sort of muscular contractions.

It is extolled very highly by some writers as an unfailing remedy in the early stages of acute gonorrhœa. The fluid extract is given four times a day, beginning with eight drops and increasing two drops every dose until the patient experiences the peculiar intoxication.

In 1870, Dr. E. A Anderson made a series of experiments upon the antiperiodic properties of gelsemium, and according to him it made an excellent substitute for the cinchona barks. Dr. W. W. Murray used it subsequently with success in a large number of cases of intermittents; but I do not think its antiperiodic properties have since received confirmation, at least

not by coming into general use. Its chief indication in this class of cases is to allay nervous excitement. I invariably give it in all classes of malarial fevers where nervous excitement exists without much pain, in preference to an opiate in any form. Where this one symptom of nervous irritability is uppermost, gelsemium will combine admirably with any antipyretic mixture that may be chosen.

It is claimed by a Southern physician of large experience in its use that it is almost a specific in bilious and gastric fevers in children, when pushed till they complain of vertigo and double vision; diaphoresis soon follows, and the little patients are convalescents.

In mania with great motor excitement this remedy is more useful than any of its synergists, in large doses, more even than opium.

In order to obtain the physiological effects of this drug, it must be rapidly introduced, and the moment the system is under its influence its effects upon the eye become as apparent as when atropine or morphia have been taken largely.

The physicians of the South, where it is more extensively used than elsewhere, prefer the strong tincture of the green root, eight ounces to the pint of alcohol.

A tincture or fluid extract made from anything else but the fresh green root is utterly worthless, as the active principle evaporates quickly, even in spontaneous drying.—[Dr. HOBB, *in London Med. Journal.*]—*Southern Med. Record.*

THE HYSTERICAL ELEMENT IN ORTHOPŒDIC SURGERY.

Dr. Shaffer's article on the above subject is a valuable contribution to a subject about which the general practitioner is very slightly conversant. The first case reported is that of a girl, aged 14, who had always enjoyed good health. About five years previous to her visit to Dr. Shaffer she fell from a a wagon, the lower part of her spine being hurt by the fall, a black and blue spot developing near the last lumbar vertebra; in a few days she recovered. When about twelve years of age she commenced exercising on horseback, and after a time complained of pain in the back, but soon recovered under treatment. About three months later she was thrown over her horse's head, when the spine was again injured. This time she became very nervous and irritable, complained of a tired feeling in the back on the least exertion, and also of tenderness over the spine. As a distant relative had had Pott's disease, the mother associated this disease with the affection existing in her daughter. The diagnosis of caries of the last lumbar vertebra was made by her physician, and she was treated accordingly, with an increase in the symptoms. Shaffer, on examination, found that there were several tender spots in the vicinity of the twelfth dorsal and first lumbar vertebra,

but there was more pain produced by slight irritation of the clothes than when deep pressure was made. There was some deformity, which disappeared when the patient was lying down; the spine was normally flexible, and the psoas and iliac muscles offered no resistance when put on the stretch, with pelvis firmly held, and the patient in a recumbent attitude. The diagnosis arrived at was neuromimesis, chiefly because of the superficial character of the pain, and the normal movements of the spine. In another patient there had been concussion of the spine, but previous to this she had complained of pains in the back. The spine presented an apparent curvature, both laterally and antero-posteriorly. On examination it was found that the deformity disappeared when in a recumbent position. Several points of tenderness existed over the spinous processes; the psoas muscles were not contracted, and there was no muscular rigidity. In this the diagnosis had been Pott's disease, but Shaffer believes it also to have been neuromimesis for the following reasons: absence of rigidity of the muscles; also of the characteristic attitude and gait seen in Pott's disease, and nocturnal cry, both of which were wanting in this case; also in the true form of the disease the pain would be referred to the region where the spinal nerves from the diseased part run. Other instances of these affections are recorded, and the following conclusions are arrived at by the writer, and given here in a condensed form: There is atrophy due to the lesion in chronic osteitis, and muscular spasm, which disappears when the patient is under the influence of an anæsthetic, but which is not affected by the administration of opium or chloral. There is also reduction of the faradic contractility. In emotional contractions, the muscular rigidity, which is variable, disappears under the influences of anæsthetics, and when asleep there is normal reaction to the faradic current. The atrophy is only functional.—[*Archives of Medicine*, April, 1880.]—*Medical Record.*

WATER AS A PROPHYLACTIC AND A REMEDY.

The subject of water drinking seems worthy of more than a passing notice. Many people have a notion that it is injurious to drink at meals. Of course one may swill down such an immense quantity of water that it shall be injurious, but a moderate quantity of fluid taken at meals is rather beneficial; the abstinence advocated by many is injurious.

A large class of patients are affected with symptoms of an undefined character, a vague unrest and disquiet showing itself by discomfort or even pain, sometimes in one place, sometimes in another; they are usually also subject to constipation; often have an unhealthy hue of skin; they are frequently classed as hypochondriacal or hysterical; there is no well defined disease. It has long been my custom to inquire of pa-

tients thus affected as to the amount of drink they take and how much urine they pass. Often the amount of drink is much below the average; there is a tendency to dryness of the skin; the urine is scanty, high colored, and strongly acid, sometimes depositing a sediment on standing. Under the use of an increased amount of water the perspiration is increased, the urine becomes more natural and the unpleasant symptoms diminish or disappear.

The waste of tisue-changes in the system must pass into the blood and can leave the system only in solution. During comparatively good health, the amount of blood is maintained at nearly the same figure, and only so much water will be parted with through the skin, lungs, and kidneys as can be restored from other sources. If too little water be ingested the perspiration will be slight, the elimination of urine will be diminished, and the excretion of waste material will be lessened. The blood will be continuously saturated with the results of disassimilation or nearly so, the removal of the waste of tissue-changes is not accomplished with sufficient regularity, and the tisues become clogged with used-up material, and nutrition is interfered with. The balance against each day is very slight, but finally there is such an accumulation that unpleasant symptoms are developed. If the person continues to eat heartily, either the surplus food passes off by the intestines, or is deposited in the shape of fat, the nitrogenized portions assisting to load the urine with urea and urates. Let a person drink a larger amount, and, the blood having a sufficient supply of water, more urine is excreted; the loss is made good to the blood by absorption, and a larger amount of waste products is taken up to be eliminated; more urea, phosphoric and sulphuric acids pass off by the urine, which is increased in amount; there is more disintegration of the tissues. This loss is made up by new material, so nutrition is increased.

Water taken with the food favors digestion; when taken into the stomach a part is absorbed by the gastric vessels, carrying with it the soluble constituents of the food. So much as is not immediately absorbed assists in softening and breaking up the larger particles of food, and thus aids in the gastric digestion by facilitating the action of the gastric fluids. A portion of the water is carried off into the intestines with the semi-digested food and acts favorably in the same way; also, the blood being well supplied with water, the fæces are not so hard and dry as would otherwise be the case, and it is easier to keep the bowels regular.

It is certainly no matter of surprise that there should be malaise and distress, when the system is loaded with worn out material, unfit for the functions of life, which the blood cannot remove for lack of menstruum; it is not surprising that the nervous system, which most requires regular nutrition, should suffer most; that muscles badly nourished should ache on

motion; that kidneys called upon to secrete an abnormally concentrated urine should become diseased; that the highly acid urine should irritate the bladder.

This view may explain why herb teas, thoroughwort, chamomile, sage, etc., were so popular in our grandmother's days, indeed are now popular. The bitter herb is a slight gastric tonic, but the water is a better solvent. Formerly the good housewife supplied the deficiency in drink by regular doses of herb tea; now the physician supplies it by draughts of spring water. Sometimes, in treating such patients as have been referred to, I administer a diuretic with the water, that elimination may be effected more speedily.

How much water should an adult drink in twenty-four hours? It must be taken into account that water is excreted by the lungs and skin as well as by the kidneys; also much of the food ingested contains water as one of its constituent parts. Hence the amount of liquid required as drink must vary slightly with the activity of the skin and the character of the food. If much of the diet is made up of soft solids, fruit, and watery vegetables, less drink will be needed than if the diet is composed of dry meats and vegetables. The amount of soup ingested would also affect the amount of mere drink required. The average amount of urine passed in twenty-four hours by a healthy adult is stated by Dr. Flint to be about fifty-two ounces, the extremes being thirty-five and eighty-one ounces. The amount of drink necessary is stated by Dalton to be about fifty-two ounces, that is, 3.38 pints. An ordinary coffee cup holds six or seven ounces. The equivalent of eight or nine coffee cups of drink would not then be an excessive amount. Repeatedly patients have told me that they drink only one or one and a half cups, morning and evening, and about the same at dinner, only occasionally taking soup, averaging less than six cups, sometime small tea cups of drink. Sometimes patients say they drink generally a little more than a pint a day.

After one has for months and years averaged an insufficient amount of drink, and the system has become charged with used-up material, it may not be wise to immediately administer large draughts, whether of ordinary drink or mineral water, but the quantity can be rapidly increased, and soon the normal average may be exceeded for a while with advantage.

I remember one patient, a lady, who came to me suffering from very distressing nervous symptoms not well defined, chiefly referable to the head; more a sense of unrest and disquiet in the body than distinctly pain. Five months previously she had gained an idea that she must not drink much, and so restricted herself to a cup of tea night and morning, taking less than a pint of fluid in the twenty-four hours. Five weeks before applying to me, the above symptoms appeared, that is, about

four months only after restricting the amount of drink. This may be called an acute case.

The following case, treated at the City Hospital, Boston, is an interesting example of the conditions found in these patients :

A man, sixty-two years old, entered the Hospital August 30th. He said he had had rheumatism at times since he was a boy, rheumatic fever seven years ago. For more than ten years he had noticed a red, sandy sediment in the vessel after micturition, which was frequent, and the quantity of urine was scanty. Seven or eight months before entrance, he first noticed shortness of breath, which troubled him in going up stairs. There was pain in the lower part of his back ; his hips ached so he could hardly step ; he had had numbness in the left leg for nearly a year. He had had jaundice two or three times and vision had been slightly indistinct. He was a large, fleshy man, with a very large, tympanitic abdomen. He had a notion that he had kidney disease, dropsy and heart disease. There was nothing of the kind ; there was no cardiac lesion, no hepatic enlargement, no signs of Bright's disease. He walked as well with his eyes shut as with them open ; his gait was unsteady. He had had fainting fits, pain all over, heat in the head and aching in back. No attempt was made to record all his complaints. On September 3d, 4th, 5th, and 6th, he passed 20, 28, 29, and 18 ounces of urine respectively. He was told to drink more freely and received fl. ext. buchu. The amount of urine rose to 40, 50, 60, and 68 ounces ; his discomfort decreased and he soon expressed himself as much relieved ; he walked much better. As there was a possibility of a syphilic taint he was put on iodide of potassium, but not until after the improvement had commenced. During the last twenty days of his stay at the Hospital he passed on an average 47-5 ounces of urine daily.

A physician applied to me for advice in regard to himself. He had many symptoms referable to overwork. I found he drank very little and was troubled with constipation. In this case the diminished supply of fluid was not the only cause of his symptoms ; but, among other means to give relief, he was advised to drink more. In about eight months I saw him again. He was well qualified to observe the effects of remedies, and stated that the increase in the amount of fluid ingested has been beneficial ; he felt better and was less constipated.

Human nature is such that if the doctor tells a patient to drink two or three pints of Cochituate or Croton water a day, in addition to tea or coffee, he will rebel and think it a queer prescription ; but if he is told to take that amount of Poland or Allandale or some similar water, he forthwith has his keg of mineral water on tap, and drinks in faith that it will, in some mysterious way, relieve his gout, rheumatism, dyspepsia,

or kidney disease, or will be good for his headaches and tired brain.

Fothergill, in his handy book of treatment, touches upon the use of water in the way above indicated (see pp. 52, 542, and 506). It seems to me that the insufficient ingestion of water is often a predisposing or even exciting cause of many diseases; that this is more frequently the case than is usually supposed.

I find that a very large proportion of those who suffer from nervous exhaustion, neurasthenia as it is called, do not drink enough. Is it an American peculiarity to ingest so little fluid? I believe it is. Will this then partly explain the prevalence of neurasthenia in America?

I believe that one reason of success of the treatment adopted by Dr. Mitchell and advocated in "Fat and Blood," is to be found in the large amount of milk which he gives his patients.

It is not to be expected, however, that in all these cases the simple increase of fluid ingested will cure our patients. Too frequently the tissues have been so long illy nourished that that simple plan is not sufficient. The time to work the greatest cures with water is before the disease has begun.—S. G. Webber, M. D., in *Archives of Medicine.—Cincinnati Lancet and Clinic.*

BATHING AFTER MEALS.

Two cases carefully studied by Dr. Naegli, and published in the *Swiss Medical Journal*, afford a striking illustration of the old warning not to bathe with a full stomach. The cases were those of two persons who died when bathing, and in whom the post-mortem examinations revealed similiar appearances, affording a certain evidence that death was due to the fullness of the stomach with food at the period of immersion. The first is the case of a lad, fourteen years old, who, on a holiday, after regaling himself with bread and sausages and a glass of beer, went into the river, with a comrade, for a swim, in the evening, and was smimming gaily at the head of his friend, when suddenly, uttering only an indistinct sound, he sank below the surface; assistance was quickly at hand, and he was drawn out within three or four minutes after he had sunk. The physician was at hand at once, and the fullest hopes were entertained of being able to restore life, as the period of immersion had been so short and the heart could still be heard to beat. Artificial respiration was at once employed, but without any success; then, without much delay, tracheotomy was had recourse to; but on opening the larynx, instead of air rushing out with the well-known sound, a stream of fluid food escaped from the wound. Every means was now attempted to remove by suction these foreign substances from the obstructed trachea, but uselessly; and, in spite of all endeavors, the lad could not be restored to

life. A post-mortem examination showed but few of the usual signs of suffocation from drowning, but the trachea was injected rosy red, contained small quantities of food, and the larger bronchi and bronchioles showed, in their lumen, small pieces of potato entangled and obstructed; even sections in the periphery of the congested lung showed the remains of food in the larger bronchioles. The second case was one of a student aged eighteen, who went to bathe after an evening meal consisting of cheese, bread and beer; and soon after entering the bath, sank suddenly, uttering a dull, gurgling sound, and was only recovered from the water a quarter of an hour afterwards, being then quite dead and incapable of being restored to life. A post-mortem examination showed, again, the larynx and air-tubes full of fluid contents of the stomach, the bronchi and larger bronchioles extending into the lung being obstructed by small particles of cheese. These two post-mortem examinations show that both of these unfortunate persons were suffocated by the food which had passed into their trachea and lungs when sinking; the explanation appears to be that the bathers had entered the water with a full stomach; that the pressure of the water on the abdomen, and the efforts in swimming, which not unfrequently produce in swimmers a slight feeling of sea-sickness, had induced nausea and vomiting. This had suddenly taken away their strength; they had sunk under the water, and in sinking had drawn in the food thrown up from the stomach and water into the larynx; the trachea had thus become obstructed by food; so that, even in the case of immediate help, which in this case was at hand, recovery could not be effected. The warning "not to bathe when the stomach is full of food" is certainly very strongly emphasized in these carefully observed and conclusive cases.—*Med. & Surg. Rep.*

THE LAW OF SLANDER AS APPLICABLE TO PHYSICIANS.

The following paper on this interesting subject appears in the last (August) number of the *American Law Register*, of Philadelphia. It is from the pen of Mr. W. H. Whitaker, attorney at law, of our city, and it teaches its lesson from a very good text:

There is, perhaps, no class of professional men more subject to abuse, and, it is believed, more powerless to obtain redress than physicians. About clergymen, the law has thrown its protecting arm, and public opinion has been wont to overlook, if not to pardon their shortcomings. The clergyman is a sort of privileged person, whose character is tried before and whose conduct is regulated by ecclesiastical tribunals, to which the courts of law have relegated it. Lawyers can take care of themselves.

For alleged professional misconduct, incapacity or ignorance, for rumored unskillful treatment of diseases, physicians who

choose may have recourse to legal proceedings. But to cowhide the editor or sue the newspaper for the circulation of a libel, may be said in either case to be a social suicide. The physician must grin and bear it. But if he braves public opinion and asserts his rights, if he endeavors to obtain satisfaction at law, the chances are, to say the least, uncertain. It is doubtful, as the law now stands, what charges of misconduct in a physician in a single instance are actionable. One court (*Camp* v. *Martin*, 23 Conn. 86) has held that words spoken of a physician, charging him *merely* with ignorance or misconduct in the treatment of a particular case, were not actionable, *per se*. The words were: "If Dr. C. had continued to treat her, she would have been in her grave before this time. His treatment of her was rascally."

Another court (*Secor* v. *Harris*, 18 Barb. 425) has adopted a contrary view in a similar case, where the words were: "Dr. S. killed my children. He gave them teaspoon doses of calomel; it killed them; they died right off, the same day." This last is no doubt a more aggravated case, but it is difficult to understand the grounds upon which the principle was distinguished in the two cases. The court said in the last instance that, in the rendition of its judgment, it was borne out by the authorities, while in the first case, the court was equally confident, after having examined the authorities, that none could be found, analogous to the case at bar, to justify an action for damages *per se*. Both, however, united on one case (*Sumner* v. *Utley*, 7 Conn. 257), as being in point, and it is amusing to observe what different constructions the two opposing tribunals gave to a case which must certainly be decided one way or the other. The Connecticut court said it thought that the case referred to, so far from varying the rule as they had given it, intended to sanction it, and quoted at length from C. J. Hosmer, as follows: "I readily admit that falsehood may be spoken of a physician's practice in a particular case, ascribing to him only such want of information and good management as is compatible with general knowledge and skill in his profession, and that when such a case arises, unless some special damage exists, his character will be considered as unhurt and no damage will be presumed. But on the other hand, it is indisputable that a calumnious report in a particular case may imply gross ignorance and unskillfulness, and do him irreparable damage. A physician may mistake the symptoms of a patient, or may misjudge as to the nature of his disease and even as to the power of the medicine, and yet his error may be of that pardonable kind that will do him no essential prejudice, because it is rather a proof of human imperfection than of culpable ignorance or unskillfulness. On the contrary, a single act of his may evidence gross ignorance and such a deficiency of skill as will not fail to injure his reputation and deprive him of general confidence."

Now the New York court, on the other hand, said that the doctrine laid down in the cases of *Poe* v. *Mondford*, Cro. Eliz. 620, and *Foot* v. *Brown*, 8 Johns. 64, both of which were adopted as authorities by the Connecticut court, had been repudiated. In the former, defendant charged plaintiff with having killed a patient with physic, and it was held that the words were not actionable *per se*, and that the law only gave an action for words affecting a man's credit in his profession, as charging him with ignorance or want of skill in general." In the latter the words were spoken of an attorney: "F. knows nothing about the suit, he will lead you on until he has undone you;" and it was held on the authority of the former that, no special damage being shown, the action would not lie. Rejecting these two cases as unauthoritative, the New York court also quoted from the case of *Sumner* v. *Utley*, *supra*, as follows: "As a general principle it can never be admitted that the practice of a physician in a particular case may be calumniated with impunity, unless special damage is shown. By confining the slanders to particulars, a man may be thus ruined in detail. A calumniator might follow the track of the plaintiff and begin by falsely ascribing to the physician the killing of three persons by mismanagement, and then the mistaking of an artery for a vein, and thus might proceed to misrepresent every single case of his practice until his reputation should be blasted beyond remedy. Instead of murdering character by one stroke, the victim would be successively cut in pieces, and the only difference would be in the manner of affecting the same result."

It is good to beat your adversary with his own weapons, and while the case of *Sumner* v. *Utley* decided in effect that slanderous words spoken of a physician were actionable *per se*, the court in *Camp* v. *Martin*, *supra*, notwithstanding, drew a favorable conclusion for holding that in its case slanderous words were *not* actionable *per se*. It is true that the case of *Sumner* v. *Utley* was somewhat stronger than either of the other two, and may have furnished grounds for the distinction that was drawn between gross ignorance in a single instance, and gross ignorance generally in the treatment of diseases, but there seems to us to be little, if any, difference between a case where the words were that a doctor killed his patient, and one where they alleged that if he had continued to treat the patient, she would have been dead by this time, so far as the presumption of incapacity is concerned. In *Sumner* v. *Utley*, the words imputed gross ignorance generally and particularly. The defendant said of the physician: "He has killed three and ought to be hung—damn him. They all died through his mismanagement. I have understood that he left an after-birth, and the man that would do that ought to be hung;" and on another occasion, addressing himself to Mrs. H., who had employed plaintiff as her physician, said: "He was the means

of her sickness by cutting an artery in her head—damn him; you ought not to pay him a cent; if Mr. H. had taken him up for it, it would have cost him $400. It ought to be put in the newspapers." The rule may be said to be as Chief Justice Hosmer put it, though it does not appear to be very clear: "This then is the correct principle, that the misrepresentations of a physician's practice in a particular case, if it does not warrant the presumption of damage, is not actionable, unless special damages are averred and proved; but if from the nature of the calumny damages are inferable, the words are actionable."

The question still remains, when do the misrepresentations of a physician's practice in a particular case warrant the presumptions of damage? It is allowed that slanderous words alleging gross ignorance generally, or such ignorance or thorough incapacity as unfits him for the proper exercise of his profession, are actionable *per se*. To say of a physician: "He is a quack;" (*Pickford* v. *Gutch*, Dorchester Assizes, 1787); or, "He is an empiric and a mountebank;" (Vin. Abr. Act. for Words, S. a. 12); or, "He is a quack; if he shows you a diploma it is a forgery; (*Moises* v. *Thornton*, 8 Term Rep. 303);" or "He is no doctor; he bought his diploma for $50;" (*Bergold* v. *Puchta*, 2 Thomp. & C. (N. Y.) 522); or "He is a drunken fool and an ass, and never was a scholar;" (*Cawdrey* v. *Tetley*, Godb. 441); or, "He has killed six children in one year;" (*Carrol* v. *White*, 33 Barb. 615); or, "It is a world of blood that he has to answer for in this town through his ignorance. He was the death of J. P. He killed his patient with physic; "(*Tutty* v. *Alewin*, 11 Mod. 221); or, "I wonder you had him to attend him. Do you know him? He is not an apothecary; he has not passed any examination. He is a bad character; none of the medical men here will meet him. Several have died that he has attended to, and there have been inquests held upon them;" (*Southee* v. *Denny*, 1 Ex. 196.) In all these cases it has been held that damages are inferable without proof; but to say of a physician, "He is so steady drunk that he cannot get business any more;" (1 Ohio 83 n.); or, "He is a two-penny bleeder;" (*Foster* v. *Small*, 3 Whart. 138); or to charge an allopathic physician with having met homœpathists in consultation, and that in the opinion of the profession it was improper to do so, and against etiquette, and further that in opinion of the profession it was disgraceful to meet a homœpath in consultation (*Clay* v. *Roberts*, 8 L. T. N. S. 397); or to charge him with adultery not necessarily touching him in his profession, without showing that it was connected with his profession (*Ayre* v. *Craven*, 2 Ad. & E. 2), have been held not actionable *per se*.

While the authorities are generally agreed as to charges of gross ignorance or incapacity in the exercise of the duties of the physician, it is not easy to determine what words are

actionable in themselves in special instances. In analogous, and even in precisely similar cases, the courts are divided. Where the words were: "He killed my child; it was the saline injection that did it;" (*Edsall* v. *Russel*, 4 M & G. 1090); or, "He has killed my child by giving it too much calomel," (*Johnson* v. *Robertson*, 8 Porter 486), they have been held actionable *per se*. And, on the contrary, the words: "He has killed his patient with physic," (*Poe* v. *Mondford*, *supra*), or, "In my opinion, the bitters A fixed for B, were the cause of his death," (*Jones* v *Diver*, 22 Ind, 184), or, "He gave my child too much mercury, or made the medicines wrong through jealousy, because I would not allow him to use his own judgment." (*Edsall* v. *Russell*, *supra*), have been held not actionable in themselves.

In the examination of these cases, it will be found that where the physician is charged with killing his patient, the words have been held actionable on account of the imputation of crime which they import, and the only case in which such language has been held not actionable, is that of *Poe* v. *Mondford*, of early origin. The case was rejected by the court in *Secor* v. *Harris*, on the ground that it was decided at a time when the doctrine of *mitior sensus* prevailed. And as for the case of *Jones* v. *Diver*, the court held that the words were not actionable, because they did not import a charge of murder; that if the defendant had said that "the bitters Dr. D. gave John Smith, caused his death; there was enough poison in them to kill ten men," he would have been held guilty of the charge, and the words have then been actionable.

How such words necessarily import the crime of murder or manslaughter, in the absence of any expression of intention, is not quite clear. This was not the ground of the decision in a case of a non-professional, charged with having destroyed the life of a patient by mistaken, but well meant, efforts to save his life. (March vs. Davison, 9 Paige, N. Y., 580.) But even if the words do not import the charge of crime or of gross incapacity generally, there seems to be reason for holding that they should be actionable. It is true, as was said in a former case, that a physician might make a mistake in his treatment of a disease, because it was rather a proof of human imperfection than of culpable ignorance, but the consequences are often as fatal to him as though the charge was a general one. His mistake might be of "that pardonable kind" which would do him no injury in his profession, but the public might not pardon it. And what if he is not guilty of the charge? What if he has done his duty towards his patient, and has adopted every means in his power, and such as were recognized in the profession as suitable for the case, to restore him to health? The consequences, so far as the public are concerned, are the same, with the additional mental suffering which every man must undergo whose conduct and whose actions are grossly misrepre-

sented before the community at large. True, the law does not deny him remedy, if he chooses to take it. Perhaps it would be more fatal to resort to legal proceedings in any case. If he does, he is compelled to show special damages, for none will be inferred. This alone would cause many to hesitate before bringing an action. The difficulty attendant upon proving damages, the length of time intervening petween the publication and consequences of a slander, would deter many from the prosecution of the slander.

As the case now stand, one may bring almost any charge of misconduct against a physician in a particular case, without subjecting himself to an action for damages *per se*, provided it does not come within the category of a statutory crime, or impute to him general incapacity.

ELIXIR CHLOROFORMI COMPOSITUS.

By W. F. McNUTT, M.D., L.R.C.L., Etc., Etc., Etc., Professor Principles and Practice of Medicine, University of California.

I have been in the habit for several years of prescribing Collis Browne's chlorodyne, in certain cases of asthma, colic, diarrhea, neuralgia, rheumatism, hysteria, etc. It has seldom failed to be of some benefit and often acted like a charm; in fact, I found it a most excellent and reliable anodyne, antispasmodic and sedative.

On account of several objections to its use, I have, after a great deal of experimentation, adopted the following formula as a substitute for chlorodyne, viz:

℞	Morp. mur.	gr. ½
	Chloral hyd.	
	Chloroform.	aa ʒ ss.
	Tinct. cinnab. ind.	
	Tinct. capsici.	
	Acid hydrocyan. dil.	aa ♏ xx.
	Spt. menth. pip.	♏ x.
	Syr. sassafras co. *ad.*	℥ j.

Dose—ʒ j.

This I have named elixir chloroformi compositus, and can heartily recommend it to those who have been in the habit of using chlorodyne. To those who have never used chlorodyne I may say that they will find elix. chlorof. comp. a most efficient remedy for many purposes and under many circumstances; for instance, in whooping-cough, asthma, emphysema, cough of many phthisical patients, in many cases of hysteria, and especially in many cases of dysmenorrhea it certainly has no equal. Given as an anodyne, it seldom produces headache or disturbance of the digestion, as does morphine, or depresses the

heart's action as does hydrate of chloral. In diarrhea accompanied with cramping pains and tormina, in teaspoonful doses, repeated every two or three hours, it generally acts quickly and satisfactorily.

In many cases of diarrhea in children, a few drops of the elixir, together with a few drops of castor oil and vini ipecac, in syrup of acacia, make a most efficient remedy.

The objections to chlorodyne are—

1. It is very expensive in this country;
2. It is not a perfect mixture, as it separates;
3. It is too concentrated to be safe for general use;
4. And principally it is a patent medicine, the exact formula of which is unknown.—*San Francisco Western Lancet*, August, 1880.

PERILS OF CHILDBIRTH IN AMERICAN AND FOREIGN WOMEN COMPARED.

A writer in the Boston *Medical and Surgical Journal* calls in question a statement made by Dr. Nathan Allen, of Lowell, that "German, English, Scotch and Irish women do not suffer the ill effects of child bearing to the same extent as do our American women." He quotes the authority of Dr. Snow, the well known health statistician of Providence, R. I., who makes a declaration exactly opposite to that of Dr. Allen, and to the effect that in all the fatal results connected with childbirth, including puerperal fever, convulsions and stillbirths, the foreign born women suffer much more, both actually and proportionally, than the women of American birth. Dr. Snow is quoted as saying that in the twenty-three years from 1856 to 1878 inclusive, 20,204 mothers of American birth and 23,139 of foreign birth bore children in Providence. Of the American women 150, or 0.74 per cent. died in childbed, and of mothers of foreign birth 209, or 0.90 per cent. Nearly all the foreign mothers were Irish, English, Scotch and German, some British American and Portuguese.

In regard to stillbirths, of 1273 children of American women 61, or 4.79 per cent., were stillborn; of the 882 children of Irish mothers 64, or 7.26 per cent., were stillborn. Of the whole number or children of foreign mothers (1354) 78, or 5.76 per cent., were stillborn. These unanswerable figures show that foreign born mothers, especially those of Irish birth, have a much greater actual and proportional number of stillborn children than the mothers of American birth, and that Dr. Allen's statement is incorrect.

Our experience in California is decidedly confirmatory of the conclusions of Dr. Snow. We had arrived at this result long before our attention was called to the subject in any publication, and have frequently expressed such a judgment, though without recorded statistics to verify it. The opinion of Dr.

Allen is quite prevalent among members of the profession. We think it is founded, not on fact or experience, but on the habitual inference that American women are less robust than foreign, and that they have fewer children. The larger families and more rapid increase of the foreign population among us, naturally produces the impression of greater vigor and superior adaptation to the processes of procreation. On looking back to the puerperal casualties which have come to our notice in past years, we cannot be mistaken in the statement that a great majority have been among foreign born women, and that women born in Ireland have furnished the largest proportion. That Americans are often less rugged and robust than foreign women may be one of the very causes of this difference; for delicate and frail women very often slip through the parturient process with less difficulty and less risk than those of stronger frame.

In regard to the perils of childbed growing out of narrow or deformed pelvis, we are strongly inclined to the belief that German women take precedence. Deviations from the normal osteological standard, both in stature and symmetry, would appear to be more frequent among them than in other nationalities. —*Pacific Medical and Surgical Journal*, September, 1880.

ERYTHOXYLON COCA IN THE OPIUM AND ALCOHOL HABITS.

By W. H. BENTLEY, M. D., LL. D., Valley Oak, Ky.

Physically and pathologically, I consider the opium habit and the "acoholic habit" or the inability to abstain from drunkenness (for I do not know that I have seen the term 'alcoholic habit' used), as nearly or quite identical.

In the following remarks, I shall use "opium" for that drug and all its preparations, and "alcohol" for all beverages containing alcohol.

Both opium and alcohol in small quantities are stimulant, carried further, hypnotic, and both, when taken in sufficient quantities, become narcotic poisons capable of producing death. The habitual use of one is contracted just as that of the other, and when carried to a sufficient extent, becomes irresistible. This is the case, at least, with nearly all the victims.

The victims of either take the accustomed drug for the stimulating effect, which, when carried to a certain degree produces a happy—a kind of ethereal—sensation. When this begins to subside, there remains a wretched sinking sensation which calls for another dose, and so on *ad infinitum*. A sufficient continuation of either habit will narcotize the brain, destroy the nervous system, and terminate fatally.

Now, if the victim of either opium or alcohol could find a preparation that would produce his accustomed stimulus without leaving a feeling of depression, he could, with the aid of very little exercise of will, abandon his vice and regain his normal condition.

In the erythoxylon coca we find that very article, for, while in the proper doses it is capable of producing the most exalted mental feeling, far more ecstatic than anything ever experienced from the use of opium or alcohol, its effects pass away gradually after a few hours, leaving a feeling of buoyant serenity, not to be succeeded by any depression. It was this property of erythoxylon, with which I was familiar, that led me to test it in the case referred to at the head of this article. That was in 1874. As I was not soon after called on to especially treat a case of opium habit, the case passed from my mind until 1878, when circumstances again brought it to memory. Since then I have sought opportunities to try its effects frequently, when learning of a case even in other counties, I voluntarily recommending the erythoxylon coca.

One word as to my mode of using the coca. As stated above, it is capable of stimulating to any given extent. Now my plan has been to begin with a drachm dose of the fluid extract, *just* when the desire for the opium or whisky is quite urgent, giving it in a little water. If this does not produce sufficient stimulus to take the place of the accustomed drug, I repeat in 30 minutes and so on. In this way, I soon find the required dose.

I request the patient to substitute the coca for the opiate or liquor, and if possible to abstain entirely from his former bane.

I would not think of giving the erythoxylon in a case of acute opium poisoning.—*Therapeutic Gazette.*

HUMAN AND BOVINE TUBERCULOSIS.

The question of the relation which the bovine tuberculosis holds to the human, is one that is again deservedly awakening general attention. When it is remembered that in some places nearly five per cent. of cattle are affected with tuberculosis, the practical, as well as the scientific importance of studying the subject will be readily acknowledged.

There are two points which need special investigation and definite settlement. These are, first, the identity of tuberculosis of cattle with that of man; and, second, the possibility of man's being infected with the bovine disease by using the flesh or milk of cows affected with it.

Bovine tuberculosis (the pearly sickness of the Germans) has always appeared to have pathologico-anatomical characters considerably different from the human disease. The tuberculosis eruption, in the former case, affects by preference serous membranes, especially those of the pleura and peritoneum. It has been called, on this account, a serous tuberculosis. There is, furthermore, a breadth and pedunculated arrangement to the serous nodules which is quite characteristic. They are sometimes arranged along the membrane like strings of pearls.

The French call the disease "pommelière," from the potato-like clusters in which the nodules group themselves. The bronchial and abdominal glands are also characteristically enlarged, each containing several distinct, round tuberculous masses. The tubercles, when they have thus appeared, have a tendency to calcify, rather than soften, as in human tuberculosis. Microscopically, they are said by some to be identical with human tubercles. Klebs, Schüppel, Fuchs, and others, take this view. Virchow, however, asserts that the pearly nodules are little lympho-sarcomata, and considers the disease essentially different from genuine tuberculosis.

The evidence that the diseases are identical comes more from experimentation by inoculation and feeding than from histological study. Thus it is now positively ascertained that inoculating bovine tuberculous matter in lower animals, such as sheep, swine, rabbits and dogs, or feeding the same with the flesh or milk of diseased cows, will produce tuberculosis in these animals. And most authorities are agreed that this is a genuine miliary tuberculosis, like that obtained from inoculating human tubercle. Schüppel, Zürn and Klebs are very positive on this latter point. Furthermore, Klebs asserts that by inoculating calves with human tubercle he has produced the characteristic pearly eruptions of the bovine disease. All this points pretty strongly to an identity between the two diseases. There are some facts, however, which oblige one to hesitate before adopting a positive opinion.

Gerlach fed twenty-seven animals upon the flesh of tuberculous cows. Of these, only eight presented lesions which could be considered tuberculous. Virchow fed fourteen small animals, of different kinds, upon the milk of a cow supposed to to be tuberculous. A large number of these animals showed the tubercular eruption upon autopsy. When the cow was killed, however, its lungs were found filled with echinococci cysts, but had no tubercles at all. Finally, a series of cases has recently been reported in *The Lancet*, by Dr. Charles Creighton, which have an important bearing upon the subject. These cases, during life, were considered to be those of ordinary acute miliary tuberculosis. On post-mortem examination, however, Dr. Creighton describes them as all having the peculiar appearances of the pearly sickness of cattle. He infers, therefore, that the two diseases, bovine and human tuberculosis, are not identical, but that they are intercommunicable. The evidence is not sufficient to settle the point, and we must leave it here for future investigation. But the probabilities of the whole are that bovine tuberculosis, whether identical with human, or not, can be communicated to man. This probability should furnish every stimulus to physicians and pathologists to investigate the subject further.—*Medical Record*, July 31.

SOME USES OF THE MINERAL ACIDS.*

BION WHEELAN, M. D., Hillsdale, Mich.

I desire to bring to your attention to-day some of the tonic uses of the mineral acids, especially when indicated by certain conditions of the urine. It is well known that, in order to enjoy healthy life, the nitrogenous food must become completely oxidized into urea and carbonic acid. Stopping short of complete oxidation, we will have uric and oxalic acids, which will poison the system as certainly as will the miasm of the marshes, and indeed their poisoning among our thinking business men and fashionable women is quite as common as that of malaria. These conditions indicated by free uric acid and oxalate of lime, small amounts of water, and high colored and high sp. gr. in the urine, countenance sodden, nervous temperament, poor appetite, sluggish bowels, coated tongue, and general feeling of *malaise*, are found, first among those men who are driven with business, do not take proper exercise or have proper rest, and who are too busy to attend to the calls of nature; and second, among those women whose life consists, not in eating regular meals, but nibbling all day, who put off nature's calls until they have attended to their own; in other words, among the fashionable women of our day.

When these cases are met with, undoubtedly the indication for treatment is to give, beside the general hygienic directions, some oxidizing agent which will change the uric and oxalic acids into the normal urea, and undoubtedly the best oxidizing agents are the mineral acids: they will act surely, quickly and powerfully. Combining them at times with quinine will be of advantage, but alone and of themselves they will cure many cases where other tonics fail to give relief, and in many cases of dyspepsia and habitual constipation, you will find on examination of the urine that they are but the products of insufficient oxidation, and as such will readily yield to the mineral acids.

I desire to present a couple of cases illustrating the use of the acids.

I. Miss Y., æt. twenty, unmarried, slender, nervous, troubled for a long time with habitual constipation, impaction of the feces, pains in the back, severe headache with dyspeptic symptoms. Urine on examination was found to have a sp. gr. of 1005, acid, urea deficient, urates and oxalates present. She had tried various laxatives and purgatives, with none but temporary relief. Believing on examination that the constipation was due to the fact that the food was not properly oxidized and assimilated, thus leaving a large amount of residue, which clogged up the bowels, dilute muriatic acid in ten drop doses was prescribed in an infusion of gentian, with the most

*Read before the Southern Michigan Medical Association, at Coldwater, July 13, 1880.

gratifying results. The bowels became regular, and the patient at the present time is entirely recovered.

II. Mr. W., æt. thirty years, a hard working business man, living in a malarial region where the drinking water is poor, and who therefore drinks but little water, has slight enlargement of the liver, pains in the back, headache, and irregular action of the bowels. The urine on examination was found to have a sp. gr. 1022, intensely acid, bile acid present, excess of phosphates, uric acid free. This is a typical case of a broken down nervous business man, whose power of assimilating food has become impaired, and whose system has become poisoned by the joint action of malarial and uræmic poisoning. The indications for the treatment in this case were for tonics and rest, so nitro-muriatic acid and quinine were prescribed, followed by nux and phosphorus pills. The result in this case was encouraging, but the patient not having changed his manner of living, the same trouble will no doubt occur again.

Gentlemen, believing that uric and oxalic acids are as certain poisons of the nerve centres as any in our list, and knowing from constantly making chemical examinations of the urine, how common a poison it is, I believe that, by a judicious use of the mineral acids, we can do much towards alleviating the miseries which afflict many of our fellow creatures, for the mineral acids are as certainly specifics in uric and oxalic poisoning as quinine is in malarial.—*Toledo Med. and Surg. Journal*, September.

THE TREATMENT OF PERSPIRATION OF THE FEET.

Dr. Ortega, in *Le Practicien*, advocates the use of a solution of chloral in this affection. A patient of his, a strong man working in an ice manufactory, suffered from it in an extreme degree, so much so that his fellow workmen would not work by his side. The epidermis of the soles of the feet was white, as if macerated; there were small ulcerations in the furrows, and also around the nails. The odor was overpowering. Dr. Ortega prescribed baths of a solution of chloral, one in fifty, and wrapping the feet in a cloth dipped in a similar solution. Two days after the smell had disappeared. Six days later, the treatment being continued, the ulcerations were less moist and covered with a layer of epidermis.—*Med. & Surg. Rep.*

Removal of Nævus.—Dr. Sigler, states in the *Pharm Centralb*, that nævus may be removed by means of croton oil, in the following manner: Push a number of needles through a cork, so that the points project 3 to 4 millimetres. Dip the points in croton oil, then insert them in the mole and withdraw. This is a sort of Braunscheidtismus. A scab will form upon the mole; and after it has dried up and dropped off the operation is twice more repeated.

EDITORIAL LETTER.

A WORD OF EXPLANATION TO MY PROFESSIONAL FRIENDS.

My confrères in medicine have hitherto accorded me a degree of confidence and support at all times gratifying although it may be, that they were occasionally in excess of my deserts.

It therefore seems to me proper to explain to those who are non-residents of this city, why it has occurred that the daily press here has for some months, been delighted to fill its columns with uncomplimentary strictures upon my efforts to discharge the very important duties of my position as member of the National Board of Health. I should, in the first place, remark that these duties related to the whole country—not to New Orleans alone. It consequently resulted that the selfishness and short sighted policy of a majority of the members of the State Board of Health, caused them to assume the attitude of declared enemies of myself, indeed, of all persons who took in consideration any interests except those comprised in their contracted view. They did not, and do not still comprehend the fact that the prosperity of New Orleans is entirely dependent upon her commerce, and that to maintain this during the hot periods of the year, she must be able to command that degree of confidence abroad, which only candor and truth can secure.

During the whole of the past season, the State Board has never, in one solitary instance, communicated to me, nor to other local boards, information touching real or suspected cass of yellow fever, if I except a note received the day following the discovery of the Excelsior case.

There are three heresies regarding quarantine which are each held to a limited extent in this city; 1st, Persons who have had yellow fever will not have it again—don't fear it, and have very little patience with those who do; 2d, It originates *de-novo* here and elsewhere, consequently quarantines are fu-

tile and should be abolished; 3d, Quarantines obstruct trade and it is right to keep them off, if even by the concealment or misrepresentation of facts. The president of the State Board expressed himself very decidedly in favor of the indigenous origin of the first Excelsior case. Certainly his conduct would indicate that the third mentioned heresy has had its influence over him. While I shall not accuse the daily papers of this city with having adopted either one of these heresies, in all probability they were persuaded that it was their duty to advocate any policy which governed the conduct of the State Board.

I take it for granted that the great mass of intelligent citizens of New Orleans, are positively in favor of every reasonable and proper sanitary measure which promises protection to the health of their own fellow citizens, or that of their neighbors. I look upon the Auxiliary Sanitary Association as being the exponent of the sentiment of the best citizens of New Orleans. Their conduct has been at all times marked by candor, sincerity and the most cordial co-operation with all surrounding boards, or sanitarians.

It is a matter in regard to which I have more than once been questioned, whether the Auxiliary Sanitary Association or I, as resident member of the National Board, should not have informed the press and through it the public, of the true condition of things relating to the conduct of the State Board. I more than once sought the advice of leading members of that body touching this point. But it seemed evident to us that any exposé during the period of danger, would have been followed by so much apprehension on the part of surrounding communities, that New Orleans would have been instantly closed by rigorous quarantine. It was determined to be the better course to endure misrepresentation and trust to the vigilance of the inspection service, and to give surrounding boards of health notification of the first visible or suspected danger.

But it was my intricate, and almost impossible duty to try to co-operate with an official who concealed from me all knowledge of real or suspected cases, or of facts connected with them. I am a devout believer in the theorem that yellow fever is a

preventible disease. Indeed, the work of 1879 and of this year, has almost demonstrated this to be a fact. But to achieve this desired end, advertisement of danger is absolutely necessary, for without it, co-operative work cannot be secured, and without co-operative work the whole scheme falls profitlessly to the ground. These are the circumstances under which I felt compelled to report to neighboring boards of health the occurrence of cases of disease in this city, which had not been diagnosed as yellow fever, and in regard to which no official notification was likely to be made from any other source. This action and the publication of an unquestionable case, in which action I took my proper official share, was the occasion of most extraordinary and unjustifiable conduct on the part of the New Orleans press. The daily papers became transmuted into medical journals, and like most sudden and new converts, assumed the exercise of functions and prerogatives which our own editorial corps are too modest to undertake. Of course, our profession everywhere understands that however illy informed, or badly disposed a public press may be supposed to be, it will never enter upon such a course of conduct unless it is instigated, aided and abetted by unworthy persons in our own ranks. The outcome of all this has been that a physician is requested to go down the coast and investigate a fever reported to be prevailing there, and although he is a gentleman whose attainments and scientific work constitute him an honor and ornament to his profession, recognized as such throughout the world;—the press of New Orleans assaulted him in the most violent manner because he pronounced the disease to be yellow fever. Subsequent disclosures and facts have fully corroborated his conclusions that yellow fever did exist, and probably yet exists, in that portion of the State. Our profession, great in its numbers and influence, will sustain him against this gratuitous rancor and injustice.

Another outcome of this sadly humiliating state of things is, that some physicians, how few or many I do not know, escape newspaper invective by silence in regard to their cases. Others secure the same end by determining not to announce a diagnosis of yellow fever unless the case should be marked by *each*

and *all* of the symptomatic phenomena written up against that disease.

The "make-up" of yellow fever from the latest official fashion plates of this city may be stated about as follows:

1st. Fever of one paroxysm.

2d. Pulse becoming slower as temperature rises.

3d. Albuminous urine.

4th. Suppression of urine.

5th. Black vomit.

6th. Bleeding from gums, or gums spongy.

7th. Skin and conjunctiva suffused and injected at beginning and becoming yellow as case progresses.

8th. Body yellow after death.

9th. Autopsy perfected by a microscope and manipulator in lovely harmony with one another.

10th. Verdict of the official reception committee that the patient is in *costume de rigéur* and may be passed into the empty apartments placarded "for yellow fever guests."

One cannot refrain from asking what the old simon-pure Bronze Jack will do for clothes if he should think proper to revisit his old haunts? Will some medical tailor provide him a new suit whose seams are so cunningly contrived that no one will recognize the wearer but himself? or will a medical monarch proclaim him royal jester and pass ordinances to prevent him from puking black stuff on his harlequin livery like his wicked rival "hemorrhagic malarial fever?"

Alas for a legion of honest Mr. Thornhills to cry out fudge—fudge—fudge, as often as the tinsel, the tawdry and the meretricious enter our profession to become false and misleading lights.

Our profession must demand some modification of these errors, for the resolution recently passed by the State Board of Health that a case shall not be published as one of yellow fever until they have met, canvassed it, and decided to proclaim it as such, is a standing menace to public health. This modification can be obtained without interfering with the professional autonomy of any practitioner. Let the practioner report the symptoms and clinical history of the case, and leave the

conclusions to others. Black vomit attending an idiopathic fever must be considered yellow fever until the diurnal variations of temperature prove the case to be hemorrhagic malarial. Black vomit with albuminous urine, or with suppression of urine, must be held to be yellow fever, until satisfactory proof shall have established a contrary fact. A fever of one paroxysm with albuminous urine and black vomit is to my mind as conclusive in regard to the presence of yellow fever as a vesicular eruption passing into a pustular form, and becoming umbilicated, following a two days' fever, would be of small-pox. But I am speaking now only as a sanitarian, for in sanitary medicine it is our professional and most christian duty, to give exposed populations the benefit of every doubt.

But amid all this defilement of our temples by the daily papers at the instigation of ignoble brethren, occurrences which have perplexed me greatly have been the statements of physicians that cases which in 1878 they would have called yellow fever, are not yellow fever in 1880. When a physician tells me he has just treated a fever of one paroxysm with black vomit, suppression of urine and body turning yellow after death, and that in 1878 it would have been yellow fever but in 1880 it is hemorrhagic malarial fever, my fingers must go into the nail wounds before I agree that the Great Master is again on earth and speaks.

If a man in 1878 meets a brindle dog with cropped ears and warns all good people against hydrophobia, and in 1880 meets an animal looking so much like the same dog, that he exclaims if it was 1878 it would be the same dog, but now it is sheep and not at all dangerous, the least I can do as a conservator of public health, is to say that there is a liability of mistake which should be most carefully looked into. It is therefore my rooted conviction that when I have information of cases of black vomit, or of albuminous urine with fever of one paroxysm, my imperative duty is to notify other health authorities of the fact. If the boards to whom I communicate this information determine to publish it, and thus create a panic, it may occasionally be regretted as having been unnecessary. But the fear of producing "panic" shall never deter me from

sounding the note of warning to others when yellow fever, or a reasonable and defensible "suspicion" of yellow fever is known to exist. Panics, after all, occasion interruptions of commerce and loss of money;—the mail or telegraph will cure the panic;—industry will replace the lost money; but if through negligence or concealment, yellow fever should be propagated, neither human skill nor human tears will restore the dead.

In order to avert future calamities people must not be led astray by false philosophy or inaccurate statements. When Sampson had planned his incendiarism against the Philistines it may be that it required a year or two to secure a sufficient number of emissaries to insure its success. It is probable that the Philistines heard of it, but to prevent panic a great naturalist and scientist went up and down the land preaching, "There is no such animal as a Fox:—he has no tail—there are no fire brands tied to his tail, our fields are green and cannot take fire." The sanitary official who excathedra states that there has not been a single case of yellow fever in the State of Louisiana this year, except the Excelsior cases, has as little warrant for such a declaration as the Philistine preacher had, and is just as likely to lead his followers into direful calamity.

But one of the hardest things to bear in the experiences of this year is in the fact that the National Board of Health has protected New Orleans in the enjoyment of a lucrative trade during the whole summer, but the newspapers have furnished the harsh currency in which reimbursement has been offered, and the resident member has been the recipient of much unmerited obloquy. The profession, outside of New Orleans, are too well aware of the truth of this statement to ask the publication of written declarations to that effect which are in my possession. It is trusted that when the facts are once revealed to the press of New Orleans, they will at least be honorable enough to admit that bad people have led them into error.

Four declarations are proper before closing this letter: 1st. My associate editors know nothing of its contents and are not chargeable with it. 2d. In any censures upon the conduct of the State Board of Health, I wish distinctly to state that I do not include Drs. Davidson, Loeber and Shepherd. 3d. The

medical profession of New Orleans do not countenance newspaper discussion of medical cases, or medical persons. They take an interest in advancing the knowledge and dignity of their calling equal to that found elsewhere. 4th. The mischief and disgrace inflicted upon us have been done by a number of persons so small that the fingers of one hand would not be exhausted in counting them.

It is to be hoped that every reader interested in the welfare of the country and in the establishment of a public sanitation so wise and upright as to insure the highest attainable degree of exemption from disease, will determine to be present at the coming meeting of the American Public Health Association. Here we can confer together and do whatever is in our power to advance the sanitary welfare of the country.

S. M. BEMISS.

NEW ORLEANS, October 29th, 1880.

Editors of New Orleans Medical and Surgical Journal :

DEAR SIRS—A letter from Dr. A. B. Hays, published in the *Picayune* of this morning, demands at least a brief notice from me; and, as I object to discussing professional topics in the newspapers, and do not admit the competency of a non-professional audience to decide questions of diagnosis, I beg the privilege of replying to Dr. Hays through your columns.

Dr. Hays says:

"I can speak authoritatively with regard to my own practice and that of Dr. Hébert, and as the entire number of cases of fever (with comparatively few exceptions) occurred among our patients, that should have some weight."

This fact, that the fatal form of fever which prevailed in the practice of Drs. Hays and Hébert did not occur in the practice of neighboring practitioners above and below them on the river, is one of the strongest points against the theory that it was a fever of malarial origin. Like causes give rise to like results, and the rice plantations in Dr. Hays' neigbborhood can hardly be supposed to produce malarial emanations different from those arising from the same source a few miles higher up or lower down on the river banks.

Dr. Hays says:

"From July 31 to date I find, upon a careful examination of my visiting list, that I have had 123 colored and 95 white patients (a total of 218) with malarial fever. Of these, 50 were white children and 59 colored children 14 years and under. Of this number there were 8 deaths among the whites and 5 among the colored, a total of 13; 9 children died and 4 adults. Of the 8 deaths first mentioned, 3 occurred in one family, of children who were very intractable and who virtually had no medication, it being impossible to exercise any control over them."

Now I have no doubt that cases of malarial fever occurred in the practice of Drs. Hays and Hébert as they are practicing in what is recognized as a malarial region, but how many of the 218 cases reported by Dr. Hays were cases of malarial fever such as occurred during the same period in the practice of neighboring practitioners and how many were cases of continued fever, such as I saw during my two visits to Point Michel, can probably never be determined, as but few temperature observations were made and no satisfactory clinical histories could be obtained.

Again Dr. Hays says:

"Dr. Sternberg is again in error when he says the fever is of "a mild type." Because he chanced upon no higher temperature than 103 1-5°, like a doubting Thomas, he disbelieves in its existence. The truth is, that 105° and 106° was not an unusual concomitant of the disease that he characterizes as "mild," and the headache, pain in the back, joints and muscles, were almost universal. Hemorrhages were common, notwithstanding his statement to the contrary, from the nose, bowels, and stomach, and hematuria was not infrequent. In not one case of the 218 was there suppression of urine, and the usual tests failed to detect albumen in more than half a dozen instances."

If I had learned during my two visits that "hemorrhages were common," this fact would only have strengthened my conviction as to the nature of the fever. Dr. Wilkinson, Sr., and Dr. Fox, who is quoted by Dr. Hays as confirming his diagnosis, have not, I am informed, had any cases of hemorrhagic malarial fever in their practice, and both of these gentlemen agree that a fatal form of *hemorrhagic* fever, with albuminous urine, is to be called yellow fever, and not to be confounded with the ordinary malarial fevers of the country, with

which, by reason of their age and experience, they are presumably more familiar than is Doctor Hays.

Dr. Wilkinson, to whose opinion Dr. H. seems in his letter to attach little weight, stated publicly in the presence of the Commission, that in his opinion the cases which he had seen in the practice of Drs. Hays and Hébert, were yellow fever, and Dr. Fox, in conversation with Dr. Bemiss and myself, expressed the same opinion, that is that some of the cases were yellow fever, from the facts which had come to his knowledge, although he had not seen any of the cases.

Dr. B. F. Taylor, who saw all of the cases in company with Dr. Hays and myself, at the time of my first visit, told me that in his opinion the disease was dengue, and that the same disease was prevailing at Port Eads. He recognized it as a continued fever of a simple paroxysm in pronouncing it dengue. If he has since changed his opinion, I am not aware of the fact.

Dr. Hébert was quite non-committal as to the nature of the disease, but I judged from his conversation that he was inclined to agree with Dr. Wilkinson and myself. However this is not a quesiion to be settled by weight of authority, but by weight of evidence. In deciding such a question as this I consider the general evidence as to the rise and progress of an epedemic of more value than the imperfectly recorded clinical observations of a busy practitioner. I obtained the best information I could and reported accordingly, but I freely admit that I had not the time to make a thorough investigation and am exceedingly anxious, in the interest of truth, that some competent person shall be sent to make an exhaustive study of this local epedemic.

Dr. Hays objects to my referring to this fever as being of a "mild type." I simply recorded the results of personal observation in so desginating it, as the cases shown me by Drs. Hays and Hébert were said to be typical ones.

There was certainly nothing in the appearance or symptoms in these cases which would lead me to expect so large a mortality as Dr. Hays reports (about 6 per cent.), on the supposition that they were of mal rial origin. But in a mild form of yellow fever this mortality would not be surprising.

Dr. Hays says "the usual tests failed to detect albumen in

the urine in more than half a dozen instances." I would like to inquire in how many instances the "usual tests" were applied. I did not get any very definite information upon this point, but inferred from my conversation with Dr. Hays that the usual tests had been applied very rarely, if at all, at the time of my first visit.

Again: "The fever yielded to quinine or cinchonidia." It certainly did not yield in the thirteen cases in Dr. Hays' practice which terminated fatally, and I may be permitted to doubt, in the absence of any satisfactory evidence, whether the cases which recovered "yielded to quinine," or got well in spite of it.

"Two different times in his report, Dr. Sternberg says that a similar fever prevailed in 1878, "which some physicians called yellow fever, but Dr. Hays believes it also to have been malarial fever."

"Presumably he refers to Point Michel, and I am at a loss to know whence he derives his information, as I perfectly well remember that *no other physician* saw any patient of mine during the fall of 1878, either in consultation or otherwise, and consequently one could scarcely be expected to make a more accurate diagnosis than the physician actually in attendance on the sick."

My information on this point was obtained from Dr. Hays himself.

If I am wrong in calling the Point Michel fever yellow fever, then I believe Dr. Taylor was right in pronouncing it dengue, for I believe it to be identical with certain cases of fever which have occurred in this city attended with hemorrhages and albuminous urine which have passed under the name of dengue. One of these, which was kindly shown me by a well known practitioner in this city as a typical case of dengue, I should have been obliged to diagnose as yellow fever if called upon to make an official report in regard to it. This would have been simply an expression of my opinion in regard to the case. I do not assume that this opinion has any more value than that of Dr. Hayes or Dr. any-body-else, and I always hold myself ready to modify my opinion when the logic of facts gives me new light upon any subject.

At present I am seeking new light in regard to "dengue." I have never met this disease, but from my reading supposed

that it was to be distinguished from yellow fever by the absence of hemorrhages, or of albumen in the urine, and the presence of certain characteristic eruptions. Now, the case of "dengue" which I saw in this city and the so-called "rice fever" of Point Michel," which I believe to be identical with it, was characterized by hemorrhages, by albuminous urine, and by the absence of any eruption. Moreover, the temperature curve, in the case referred to, shows a single paroxysm not distinguishable from that of yellow fever. If this is dengue, how are we henceforth to make a diagnosis of yellow fever? If it is rice fever, how does it happen that cases occur in the city of New Orleans? If it is hemorrhagic malarial fever, how is it that it prevails in a fatal form in certain localities not differing as to malarial producing environment from other localities where the same causes only produce the well known intermittents and autumnal remittents? Such an infected centre was the locality where the four Giordano children died in one house. Dr. Hays' mortality statistics include all the scattered cases of malarial fever occurring in his practice; but suppose we fix our attention on the immediate neighborhood of Giordano's house. I can count up six deaths that have occurred in the neighborhood, and there may have been more that I have not heard of. We must also include the child (in the practice of Dr. Geo. Howe) whose parents fled from the pestilential locality to a place upon the outskirts of this city. This child died after a sickness of less than three days, with suppression of urine and black vomit. In all, then, we can count seven deaths by *hemorrhagic malarial fever(?)* all coming from this one little settlement, having a population probably not exceeding 30 or 40 souls.

I shall not reply to Dr. Hays' ungenerous assertion that "it was very patent to everybody that Dr. Sternberg came with the evident intention of finding yellow fever," but I confess that he is correctly informed as to a mistake in diagnosis made by myself and the health officials of New York in regard to a fatal form of fever which prevailed at Governor's Island, New York Harbor, some ten years since. We all fell into the old and oft repeated blunder, and supposed we were dealing

with a malignant form of malarial fever, until the distinguished Dr. Nott, formerly of Mobile, saw the cases and without hesition made a diagnosis of yellow fever, which it undoubtedly was. This was my first acquaintance with yellow fever and I made the mistake in diagnosis which I believe that Dr. Hays has made this year, and which the literature of yellow fever shows to have been made by many other physicians quite our equals in diagnostic ability. I have tried to profit by my mistake and have since had ample opportunities for the study of this disease. These studies have made me very suspicious in regard to fatal forms of fever which prevail over a limited area and are attended by hemorrhages and albuminous urine.

THE AMERICAN PUBLIC HEALTH ASSOCIATION

Will hold its eighth annual meeting in New Orleans, commencing Tuesday, December 7th, 1880, and ending Friday, December 10th, 1880.

Papers will be presented on Abattoirs, Epedemics, Life Insurance in its relation to the Public Health, The Storm-water question in City Sewerage, The Sanitary Engineering problems of the Mississippi River, The Hygiene of Emigrant Ships, The Prevention of Venereal Diseases, Voluntary Sanitary Associations, etc.

The special questions suggested for discussion at this meeting in addition to those connected with the papers above referred to, relate to methods of preventing the spread within a town or city—after they have once been introduced—of such contagious or spreading diseases as diphtheria, scarlet fever yellow fever, measles, small pox, etc., and are as follows:

A. What are the best means of securing prompt and reliable information as to the presence and location of cases of such diseases?

B. What are the best means of securing isolation of the first or of single cases of such diseases, and what are the chief difficulties in securing such isolation?

C. Under what circumstances is it proper to declare such disease epidemic in a place?

D. Under what circumstance is it proper to recommend the closure of schools on account of the prevalence of such diseases?

E. What precautions should be taken at the termination of each case as to—

a. Care and disposal of the dead?

b. Disinfection and cleansing of the room and house?

c. Period of time at which it is safe to allow the convalescent to return to school or society?

Brief practical papers upon any or all of these points are earnestly requested, and it is hoped that those attending the meetings will come prepared to give the results of thier experience upon the questions, and to make positive recommendations.

Gentlemen who propose to present papers at this meeting are respectfully requested to notify the President and Secretary of their intentions and of the title of their papers, in order that they may be assigned a proper place in the programme.

By order of the Executive Committee,

[Signed.] JOHN S. BILLINGS, M.D., *President.*

E. H. JANES, M.D., *Secretary.*

Names and addresses of the officers of the American Public Association:

President, John S. Billings, M.D., Surgeon U. S. A., Washington, D. C.

Vice-President, R. C. Kedzie, M.D., Lansing, Mich.

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C. F. Folsom, M.D., Boston, Mass.

J. G. Thomas, M.D., Savannah, Ga.

A. L. Gihon, M.D., Medical Director, U. S. N., Washington, D. C.

NOTE.—Volume V of the Transactions is nearly ready for distribution, and will be sent to all members whose annual dues for the current year are paid.

Washington, D. C., Sept 14th, 1880.

Reviews and Book Notices.

The Skin in Health and Disease. By L. Duncan Bulkley, M. D., Attending Physician for Skin and Venereal Diseases at the New York Hospital, Out-Patient Department, etc. Small 12 mo. Pp. 148. Philadelphia: Presley Blakiston. 1880. [Sold by Armand Hawkins, 196½ Canal street.]

This little volume is No. X. of the Series of American Health Primers edited by W. W. Keen, M. D. Chapter I. treats of Anatomy and Physiology of the Skin; Chapter II. of the Care of the Skin in Health; Chapter III. of Diseases of the Skin; Chapter IV. of Diet and Hygiene in Diseases of the Skin.

In Chapter II. he cautions against the use of cosmetics, but would allow the use of rice powder and calcined magnesia, with moderate frictions. He disapproves of the general use of so-called "medicated soaps," preferring a plain article made of pure materials.

In Chapter III. he remarks upon the danger of communicating syphilis by vaccination, that it has no existence when the vaccination is performed with bovine virus. It might be added that there need be no risk with carefully selected humanized virus. He speaks, however, with reprobation of the habit of indiscriminate kissing, so generally practiced among women and children in obedience to a ridiculous fashion, for it is undeniable that syphilis is quite liable to be communicated in this way. The use in common of the same blowpipe among glass-blowers, the same pipe among tobacco-smokers, and the same toys among children, has led to disastrous results. It is an evidence of curious perversion of judgment, that vaccination has suffered serious discredit of late, while these other practices are pursued with undiminished frequency.

So far, we quite agree with the author, but when he advocates compulsory vaccination, we utter a modified dissent. As a qualification for entry to a public school, the military service, or any voluntary association, is quite proper; but we do insist that the fool-killer is a public benefactor and ought to have a chance in every well regulated community, and the claim of small-pox to this distinction cannot be controverted.

S. S. H.

A Practical Treatise on Tumors of the Mammary Gland: embracing their Histology, Pathology, Diagnosis and Treatment. By Samuel W. Gross, A. M., M. D., Surgeon to, and Lecturer on Clinical Surgery in, the Jefferson College Hospital and the Philadelphia Hospital, etc. Illustrated by 29 engravings. 8 vo. Pp. 246. New York: D. Appleton & Co. 1880.

In the preparation of this work the author has made use of the numerical plan of investigation, having analyzed 65 cases of cysts and 902 neoplasms, in which the microscope was used for verification of diagnosis. The opinion that carcinoma may be permanently relieved by early and thorough extirpation is maintained with unusual confidence by Dr. Gross, but based on cases where the diagnosis was confirmed by the microscope, so that his opinion is entitled to great weight.

On the question of transformation from a benign to a malignant form of tumor, the author declares—"The tendency of true adenoma to pass into carcinoma is so well established that it need not be dwelt upon;" and he cites the opinion of Billroth, Labbé and Coyne, and Duplay, that the metamorphosis of fibroma into sarcoma is so frequent, that primary sarcoma of the mamma is very rare, while the opponents of change of type in neoplasms would explain the case by alleging latency and subsequent rapidity of growth.

Rejecting the idea of the constitutional origin of carcinoma, he maintains that heredity has a marked influence, being found to exist once in nine cases, thus serving as a mark of distinction between benign and malignant tumors. Indeed he regards heredity as the only valuable consideration in the genesis and diagnosis of mammary tumors, on reviewing their predisposing and exciting causes. Their mode of development he supposes to be governed by the changed proportion of the component tissues of the breast at different periods of life, the carcinomatous growth belonging to the period of decline in the glandular activity of the organ. More precisely, he concludes that, in its rudimentary stage, the prevailing morbid growth is fibroma; after menstruation begins, but while the connective tissue is still in excess, fibroma and fibrous sarcoma are most common; between 20 and 30 years of age, medullary sarcoma is most frequent; between 30 and 40, cystic sarcoma and fibroma and true adenoma are generally found; lastly, during the disappearance of the lacteal structure and the relative excess of connective tissue, myxoma and carcinoma arise.

It is remarkabre that *pain* is overlooked as a point of diagnosis between benign and malignant tumors, and that it is not even mentioned as a symptom. The word is not found in the alphabetical index.

The only remedial measure regarded by the author as efficacious is the knife, and this he uses thoroughly, removing the whole organ and cleaning out the axilla for greater security.

As this is an age of monographs, and the present work stands alone in our language on this special subject, it is sure to attract the attention of surgeons, and in most respects to stand as authority. S. S. H.

The Brain as an Organ of Mind. By H. Charlton Bastian, M.A., M.D., F.R.S, Prof. Path. Anatomy and Clinical Medicine, Univ. Col., London, etc. With 184 Illustrations. 12 mo., pp. 708. New York: D. Appleton & Co. 1880.

A large portion of this work is devoted to the anatomy of the nervous system, viz: twelve of the thirty chapters; but in this description we find all forms of animal existence, from the mollusk up. This very fact illustrates the scope of the work, and the well known reputation of the author gives promise in advance that its various subjects are thoroughly treated.

In the chapter on The Scope of Mind, it is noteworthy that he transcends the ordinary limits of mental action, as bounded by consciousness, which have been recognized by previous writers, particularly of the metaphysical school. "For," he observes, "it is impossible to draw any valid line of demarcation between many unconscious nerve actions taking place in the brain of man or any lower animal, and others (with which they are continuously or genetically related) in the spinal cord, or in any of the ganglionic masses in different parts of the body. The division of the Nervous System into Brain, Spinal Cord and Sympathetic System, is one which, though justifiable enough on anatomical grounds, is much less so in a physiological point of view. The Nervous System is really one and indivisible; so that, if, with certain reservations, unconscious nerve actions occurring in the Brain are to be regarded as mental phenomena, we can find no halting point short of including under the same category any unconscious nerve actions

of a similar order, wherever they occur. In this sense, therefore, almost the whole Nervous System would have to be regarded as the organ of Mind, while the Brain should be regarded as merely its principal component part."

The natural sequence of the above proposition would be to attribute mental action to the lowest orders of being, in which may be found traces of nervous structure. Moreover, it is evident that the mental operations of the young of domestic animals and of mankind are essentially alike, and that later they vary in degree rather than in kind. Now, what is the soul or spirit of a man, if not his mind? And if the mind of man be immortal, why not that of the oyster? These questions we must leave to Dr. Bastian and the theologians to settle as they can, by compromise or disagreement. We prefer the position of Agnostic.

In Chapter XI. he remarks: "As discrimination is generally recognized by philosophers to be the root faculty or most fundamental manifestation of Intelligence, we shall find in the phenomena of Reflex Action, now about to be illustrated, a further strong support for the view that the nervous system generally is to be regarded as the Organ of Mind."

Speaking of the mantis, an insect resembling a cricket, he adds: "The creature is notable for a long, narrow, first thoracic segment, to which are attached a pair of large and powerful arms terminating with hooks, with which it is accustomed to seize and pierce its prey. When the head, together with this first thoracic segment was excised, the body of the insect, supported on its four remaining legs, resisted attempts made to overturn it, and at the same time agitated its wings and wing-cases."

Dr. Carpenter observes: "If the head of a centipede be cut off while it is in motion, the body will continue to move onwards by the action of its legs; and the same will take place in the separate parts, if the body be divided into several distinct portions." Each division of the creature's body therefore produces a new mind, and raises the question of a new immortal soul!

The experiment of Pflüger seems to be adduced by the author for the special exercise of those who would draw a distinction between reflex action and the act of reasoning. "He

placed a drop of acetic acid on the upper part of the thigh of a decapitated frog, and the segments of the corresponding limb were quickly flexed, so that the foot was made to rub the seat of irritation. He then amputated this foot of the headless animal before re-applying the acetic acid. The result was most remarkable. The maimed animal began to make fresh efforts to rub the irritable spot, but was unable to reach it, now that the foot was removed. After some moments of agitation, as if the brainless creature were seeking a new means of accomplishing its end, the motor stimulus flowed out in a different direction, causing the animal to bend the limb of the other side, till with its foot it succeeded in rubbing the irritated region."

We have dwelt so long upon this, the leading topic of the work, the one which bestows its title, that no space is left for the remainder. It has already been noted that the anatomy of the nervous system, both human and comparative, is extensively and thoroughly treated. In respect to physiology there is even greater thoroughness, but this is mostly restricted to the human race. It well represents what is now known on this branch of physiology, including the recent observations of Flourens, Brown-Sequard and Ferrier, and will prove acceptable and useful to those interested in such studies, but without time or opportunity for original investigation. S. S. H.

The Practitioner's Reference Book. By Richard J. Dunglison, A.M., M.D. Second edition, revised and enlarged. 8 vo., pp. 476. Philadelphia: Lindsay and Blakiston. 1880. [Sold by Armand Hawkins. 196½ Canal st., New Orleans.]

The demand for a second edition of this work in three years s evidence of its appreciation by the profession. In the present edition the author has added matter on a variety of new subjects, so that the size of the volume is increased nearly one half. The work is intended for practitioners rather than students, and some of the matter, particularly in the department of Therapeutics, would be quite unsuitable for the novice in practice. The book will be found a great convenience, presenting a large mass of practical information gathered from various sources of knowledge, and saving the trouble of searching a library, or in absence of a library supplying an absolute want.

The table of contents is quite full, but the index needs great enlargement to represent the subjects treated. This should be attended to in the next edition. S. S. H.

A New School Physiology. By Richard J. Dunglison, A.M., M.D., Author of "The Practioner's Reference Book," Editor of Dunglison's "Medical Dictionary," etc. Illustrated with 117 engravings. 12 mo. Pp. 312. Porter & Coates: Philadelphia. 1880.

The importance of learning something of the anatomy and physiology of the human body is now so generally acknowledged by educators, that the need of suitable school text-books is well recognized. This work is a competitor of several others of acknowledged merit, and its chief claim to favor seems to be that it touches somewhat upon Comparative Anatomy and Physiology. It is to be regretted, however, that the subject of Hygiene is totally ignored, in which respect it compares unfavorably with most of its rivals.

A somewhat cursory examination has brought to our notice several errors, which ought to have been avoided, and should not be repeated in a future edition. On page 15, the author remarks—"The source of supply of food to the vegetable is the earth that surrounds it and in which it is firmly fixed." Nothing is said of the air, from which is supplied the carbon that forms the great bulk of vegetable structure.

On page 62 we find: "How does the flesh of the animal get the nitrogen, of which it is composed; if there is none in the food? The air it breathes is largely made up of nitrogen, and this is doubtless the chief source of its supply, passing into the animal's lungs, and thence into the general system." If this supposition were true, the expired air must contain less nitrogen than the atmosphere around; but other physiologists say that it generally contains a little more.

On page 80 he enumerates four salivary glands, though on the next page the sublingual gland is recognized.

On p. 99 he estimates the daily secretion of the gastric juice at five or six pounds, and on page 104 at fourteen pounds.

The book is of convenient size and its style comprehensible

by young pupils, but, for reasons just stated, we think it bears comparison unfavorably with other works of its class.

S. S. H.

Transactions of the Medical Association of Georgia. Thirty-First Annual Session, Augusta, April 21, 22, 23, 1880. 8vo. Pp. 251.

Our notice must be limited to a few of the most important papers.

On the subject of Organic Affinity and Vital Selection, Dr. Lewis D. Ford entertains ideas probably evolved from his own imagination; certainly no one is likely to question their originality. His theory is, that the quality of the arterial blood is altered after the giving off of every branch in the course of the main trunks, and the vital selection by each organ of its needed constituents. Beginning with the first off-shoots, the coronary arteries, he asserts that the onward current in the aorta is altered in quality from the blood of the left ventricle. He is as confident of his correctness as was LeVerrier in his calculations, on which he located the new Planet, Neptune, and asserts, of the blood in the ascending aorta and of that of the descending aorta below the emulgent arteries: "If you do not note the difference, it is because of the imperfection of your analysis." If he would only put his notion on the ground of religious faith, we should say: Let him enjoy it by all means; but we demur to a parallel between his speculation and a mathemati calculation.

Dr. Battey advocates the amputation of a limb for a scrofulous joint, when practicable, in case of pulmonary phthisis, and adduces strong evidence to prove its beneficial effect on the pulmonary affection. Apart from special evidence, the practice seems quite reasonable.

Dr. J. C. Le Hardy is opposed to increasing the powers of the National Board of Health to the extent proposed by the bills of Messrs. Harris, Young and Acklen in Congress, which might result in serious interference wither inter-State commerce. In this we quite agree with Dr. Le H., believing that the moral influence of the National Board can accomplish far more good than all the powers which Congress could confer.

The exercise of such powers, under National authority, as have heretofore been enjoyed by the States individually, would naturally excite jealousy and provoke opposition; while experience proves the influence of that body to have been immense in restraining local authorities from imposing arbitrary quarantines under the influence of distrust and panic.

Another object of his paper is to prove that the importance of quarantine has been magnified at the expense of local sanitation. To illustrate his position, he presents tables to show the trifling ravages of yellow fever in this country compared with those of other diseases, which are not affected by quarantine, but would be by judicious sanitation. With some allowance for errors in his figures, apparent to our personal knowledge, we assent to his general claim, that local sanitation in reference to all preventible diseases is of more consequence than quarantine. But we cannot assent to his condemnation of quarantine in principle, because it has not fulfilled all that was desired or expected of it. He asks, incredulously, if not sneeringly, "Did the rigid system of quarantine established by this [the National] Board serve to protect the people of the Mississippi Valley from the visitation of the yellow fever in 1879?"

We apprehend that a suitable answer would be a comparison of the ravages of yellow fever in 1878 and 1879. In the former year it spread from one focus, New Orleans, over a large portion of three states and reached six others; in the latter year three foci sprung from the ashes of the epidemic of 1878, but from Memphis and New Orleans the fever was thoroughly planted in only one spot; while the spread from Morgan City is clearly attributable to neglect or concealment of the first cases and want of inspection service west of Morgan City. It will not do to attribute the whole difference in prevalence of yellow fever between 1878 and 1879 to improved local sanitation the latter year, for the infection was *conveyed* in 1879 to small hamlets and plantations not visited the previous year, and whose sanitary condition had undergone no appreciable change. Improved local sanitation probably deserves much credit in limiting the spread of

the fever at New Orleans in 1879, but such efforts at Memphis were unavailing. Indeed, the inland quarantine regulations relative to Memphis took the honors over sanitation that year, for the infection did not escape from the city after the establishment of quarantine. Quarantine is condemned totally for its occasional failures: subject sanitation to the same reasoning, and it must be condemned likewise. Candor will recognise imperfections in both, and the part of wisdom would be to use and improve them both.

S. S. H.

Chirurgie Antiseptique, Principes modes d'application et resultats du pansement de Lister. Par Le Dr. Just Lucas-Championnière. Paris: 1880.

Dr. Just Lucas-Championnière has published a second edition of his work on Antiseptic Surgery, which has been entirely revised and much matter added from his own personal surgical experience.

Since the publication of the first edition in 1876, antiseptic surgery has made notable progress in France, and many surgeons now vigorously practice its principles.

M. Lucas-Championnière has thoroughly tested the antiseptic system, and gives it his earnest and enthusiastic support. He promises to all who will accept and follow the teaching of Lister, "the disappearance of the accidents of wounds in the worst surroundings; a regularity in the process of repair hitherto unknown; a surgery without suppuration and without danger; a rapidity in recovery which had never been imagined before; and the possibility of performing with security operations that had formerly been regarded not only as dangerous, but even criminal." He furnishes the results of his own practice in cases of compound fracture, pseudoarthrosis, amputations and disarticulations, opening joints, hernia, laparotomy and ovariotomy, and in gynecology and midwifery, entitling him to speak with authority on the question of antiseptic surgery.

A work so modest and earnest is worthy of careful perusal and must conduce to the advancement of the principles of Lister's system.

D.

Books and Pamphlets Received.

The Etiology, or Nature, Causes, etc., of Diphtheria. An Address delivered before the N. H. Medical Society, at its Nineteenth Annual Session, June, 1880.

Inaugural Address. By J. A. Murphy, M. D., Cincinnati. Reprint from the Cincinnati Lancet and Clinic, June 26th, 1880.

The Vinum Nutrio-Phosphaticum. The Orthozoic Chemical Association.

Detroit Medical College. Order of Exercises for the Freshman, Junior and Senior Classes. Regular Term, 1880–81.

Suggestions on the Management of Natural Labor. By J. W. Singleton, M. D., Paducah, Ky. Reprint from the St. Louis Medical and Surgical Journal, June 20th, 1880.

A Catalogue of the Academical Department of the University of Louisiana, and its Adjunct High School, New Orleans, La. Second Session, 1879-80.

President's Address before the Mississippi State Medical Asso-sociation at the Thirteenth Annual Session, held at Vicksburg, Mississippi, April, 1880. By E. P. Seele, M. D., of Aberdeen, Miss.

Report of the Bureau of Organization, Registration and Statistics to the American Institute of Homœopathy, at its Session held in Milwaukee, June 15th, 1880.

Diagnosis of Malignant Tumors of the Upper Jaw in Youth. By L. McLane Tiffany, M. D., Professor of Operative Surgery, University of Maryland. Reprint from Transactions of the Medical and Chirurgical Faculty of Maryland, 1880.

An Address on the Nature of the Science and Art of Medicine and their Relations to the various important interests of the People. By N. S. Davis, M. D., L.L. D., Chicago, Ills. Reprint from the Chicago Medical Journal and Examiner, May, 1880.

The American Medical College Association. Fourth Annual Meeting held at New York City, May 31st and June 1st, 1880.

Seventeenth Annual Report of the New York Society for the Relief of the Ruptured and Crippled. May, 1880.

Pregnancy-Vomiting. By J. Marion Sims, M. D., L.L. D. Reprint from Archives of Medicine, June, 1880.

The Mechanical Treatment of Cystocele and Procidentia Uteri. By Eugene C. Gehring, M. D., Consulting Physician to St. Louis Female Hospital, St. Louis. Reprint from the American Journal of Obstetrics and Diseases of Women and Children. Vol. XIII, No. III, July, 1880.

Ophthalmic Operations, with Remarks on After Treatment. The Ophthalmic Use of Quinine, and its Therapeutic Action. By A. Sibley Campbell, M. D., Augusta, Ga. Reprint from the Transactions of the Medical Association of Georgia, April, 1880.

Anæsthesia by ethyl bromide. By H. August Wilson, M. D., Ophthalmic and Aural Surgeon to St. Mary's Hospital, and Surgeon in charge of the Surgical Out-Patient Department, etc. Reprint from the Medical and Surgical Reporter, August 7th, 1880.

Fortieth Annual Announcement of Missouri Medical College, St. Louis, Mo.

The Use of the Sphygmograph in Practice. By Abram B. Arnold, M. D., Professor of Clinical Medicine, College of Physicians and Surgeons, Baltimore, M. D. Reprint from Transactions of the Medical and Chirurgical Faculty of Maryland, 1880.

Myopia, in its Various Phases. By Julian J. Chisolm, M. D., Professor of Eye and Ear Diseases in the University of Maryland, Surgeon in charge of the Presbyterian Eye and Ear Charity Hospital, etc., etc. Baltimore, M. D.

Artificial Inflation as a Remedial Agent in Diseases of the Lungs. By W. Y. Gadbury, M. D., Yazoo City, Miss.

Meteorological Summary—September.
Station—New Orleans.

Date.	Daily Mean Barometer.	Daily Mean Temp'ture.	Daily Mean Humidity.	Prevailing Direction of Wind.	Daily Rain-fall.	General Items.
1	29.863	84.0	67.3	S. W.	.00	Highest Barometer, 30th, 30.261.
2	29.989	82.7	70.0	North	1.30	Lowest Barometer, 1st, 29.617.
3	29.972	82.7	71.0	S. E.	.30	Monthly Range of Barometer, 0.472.
4	29.960	79.7	77.7	S. W.	.30	Highest Temperature, 90° on 1st.
5	30.010	82.0	70.0	N. W.	.41	Lowest Temperature, 63° on 30th.
6	29.976	81.7	76.0	S. E.	.18	Greatest Daily Range of Temperature,
7	29.896	76.1	89.0	West.	1.65	15° on 29th.
8	29.937	74.2	82.3	N.W.	.16	Least Daily Range of Temperature 7°
9	30.057	70.0	70.3	N. E.	.00	on 24th.
10	30.091	70.7	88.3	N. E.	.08	Mean of Maximum Temperatures, 82.7°
11	30.147	76.5	89.5	East.	.19	Mean of Minimum Temp., 74.2°.
12	30.124	80.5	79.0	N. E.	.00	Mean Daily Range of Temp., 11.3°
13	30.045	77.7	88.0	N. E.	.00	Prevailing Direction of Wind, East.
14	30.019	77.0	67.0	N. E.	.00	Total Movement of Wind, 5,151 miles
15	30.044	72.0	72.7	N. E.	00	Highest Velocity of Wind and Direc-
16	30.050	74.0	77.3	East.	.00	tion, 21 miles, on 17th.
17	30.064	76.5	76.0	East.	.00	Number of Clear Days, 7.
18	30.098	77.2	70.7	S. E.	.00	Number of Fair Days, 14.
19	30.121	77.5	74.7	East.	.00	Number of Cloudy days on which no
20	30.122	81.0	66.0	East.	.00	Rain fell, 0.
21	30.091	77.7	82.0	East.	.00	Number of Cloudy Days on which
22	30.076	78.0	81.3	East.	.19	Rain fell, 9. Total number of days
23	30.051	76.2	82.0	S. E.	.66	on which rain fell, 19.
24	30.035	75 2	90.3	N. E.	1.03	Dates of Lunar Halos, 14th.
25	30.013	75.5	87.7	East.	.26	
26	30·015	79.7	81.0	South	.31	
27	30.006	75.0	86.3	S. W.	.43	
28	30.102	70 5	58.0	N. W.	.03	
29	30.152	73.2	60.3	North	.00	
30	30.207	69.5	55.0	N. E.	.00	
Sums	.....	....	....	.....	7.48	
Means	30.044	76.8	76.2	East.	2.49	

COMPARATIVE TEMPERATURE.

1871.....		1876	79°.1
1872.....		1877.....	78°.4
1873 .....78°.8		1878.....	78°.7
1874.....78°.9		1879.....	78°.5
1875.....76°.6		1880.....	76°.8

COMPARATIVE PRECIPITATION

1871.....inches.		1876: .26	inches
1872..... "		1877: 13.21	"
1873: 3.19 "		1878: 2.64	"
1874: 4.21 "		1879: 3.15	"
1875: 7.89 "		1880: 7.48	"

L. DUNNE,
Sergeant. Signal Corps, U. S. A.

Mortality in New Orleans from September 18th, 1880, to October 16th, 1880, inclusive.

Week Ending.	Yellow Fever.	Malarial Fever.	Consumption.	Small-pox.	Pneumonia.	Total Mortality.
September 25	0	7	4	0	2	104
October 2	0	12	12	0	4	103
October 9	1	5	15	0	5	107
October 16	0	8	13	0	2	96
Total....	1	32	44	0	12	410

NEW ORLEANS
MEDICAL AND SURGICAL JOURNAL.

DECEMBER, 1880.

ORIGINAL COMMUNICATIONS.

Dengue.

By S. M. BEMISS, M. D.

Professor of Theory and Practice of Medicine and Clinical Medicine.

Clinical Lecture Delivered to the Medical Class of the University of Louisiana in the Amphitheatre of Charity Hospital October 25th, being one of the Introductory Course.

A few days ago I promised some of the gentlemen of the class to tell them how much, or how little, I know of dengue. If, simply observing, or even treating a large number of cases of a given form of sickness gave one competent information respecting its essential nature, I might then be qualified to give you a much more accurate account of dengue as a substantive disease, than I am now able to lay before you. But even a medical observer may sometimes be brought in contact with very many cases of a malady, without having its pathological character unfolded to him.

The term "dengue" as a designation of a particular affection, is differently accounted for. It has been said that this is a Cuban word for cloak, and that it is applied to this disease because of the chilly sensations attending its advent. The best accepted account of the origin of the word, is that the term "dandy fever," was first given to the disease by the negroes of Jamaica or Trinidad from the peculiar affected gait of persons attacked by it and was afterwards corrupted into "dengue." There are many synonyms for the disease, "scarlatina rheumatica" is one of the oldest and most interesting to you—because it shows the prominent part accredited to the eruption as a symptom in the early history of the affection. "Breakbone" fever is a common vulgar name applied to

the malady—and those of you who have already suffered with attacks, will say that it is not an inapt designation.

Dengue may be defined to be an acute infectious disorder, marked by a fever of one paroxysm; by excruciating neuralgias, followed by an eruption varying in its characteristics and time of appearance. It is an epidemic disorder sweeping in its character, so much so in truth, that if yellow fever were to prevail as equally general as dengue, and like it attack the same individual repeatedly, it would be manyfold more to be dreaded than now. If cerebro-spinal meningitis were equally sweeping and as fatal as it usually is, it would devastate every population it invaded.

Let us now consider the medical history of dengue.

Sir W. R. Smart, of England, speaks of dengue as prevailing in Philadelphia in 1778 to 1784. Rush also describes an epidemic of a fever to which the inhabitants applied the term "breakbone" in Philadelphia in 1780. But it is very evident from Rush's accounts of the disease, that its prevalence was attended by some other form of sickness, most probably remittent fever. After 1780 very little is said of the disease until 1824 to 1828, when it prevailed as a pandemic in the British East Indian possessions. In 1826 the disease made its appearance in the West Indies and at Savannah in the United States. It appeared in 1828 in New Orleans and at various other places along the Gulf and Atlantic coasts.

Since 1828 there have been repeated epidemics of dengue in the United States, notably the epidemics of 1850–1873 and 1880.

Let us now enquire into the symptomatology and pathological nature of dengue.

An attack of dengue is usually sudden and liable to occur at any time during the night or day, differing in this respect from malarial fevers, which generally begin during the day. It is ordinarily ushered in with a chill, or chilliness, not infrequently described as flushings of hot and cold. These sensations often last for a day or two, much to the annoyance of the patient. But they are a small part of his afflictions, when compared with the neuralgias which are so prominent as to fix the nomenclature of the malady in every country where it prevails.

The pain of dengue is an experience never forgotten—often indeed referred to as the sum total of human suffering. There is pain everywhere, pains fixed, fugitive, lancinating, stabbing boring, contusive and bruised, bad while the patient is quiet, worse when he moves. Gentlemen, I speak from a very recent experience and can add to my testimony that of a venerable clergyman who a few days since said in my presence that the effect of dengue pains was not in the least Christianizing. The neuralgias of dengue are not evanescent. They are liable to continue after the disease has run its course. Periarticular swellings often attend or follow the attacks, but in my experience effusions into synovial cavities are not common. There is therefore a perfectly marked distinction between tke disease and rheumatic arthritis. The resemblance to muscular rheumatic is more decided, but even here there is a well marked line of differential diagnosis. Muscular rheumatism is more localized. Again I may say that I have never known the heart or its investments to become involved in the morbid process of dengue.

The fever of dengue is monoxysmal—that is, it is a fever of one paroxysm. I think it may be safely asserted that the late Dr. d'Aquin of this city was the first close recorder of the temperature curves of dengue. He found that the march of temperature in dengue shows a continuous rise until the hight est marking is reached, usually upon the first, second or third day of the attack. This highest point of temperature has a short stadium of a few hours, when a remission occurs, soon to be followed by a second fever not, however, reaching the maximum point of the first exacerbation. These observations of Dr. d'Aquin, therefore, prove that while the fever of dengue is a fever of one paroxysm, there is nevertheless a decline of temperature during the paroxysm which divides two points of acmè. The first exacerbation we may term the primary fever dependent upon the disturbance of the heat making processes of the system, or its diffusion and radiation, by some direct effect of dengue poison upon the chemistry of the system. The second, in all probability, is more or less directly connected with the eruption, when present, or its repression when absent

These markings of temperature are so nearly those of yellow fever that great care should be observed not to confound them. In the first place, there is no secondary fever in yellow fever, except that due to blood poisons accumulated in consequence of the deranged chemistry produced by the special poison itself. Again, a secondary fever in yellow fever may be diagnosed by the obvious indications of a vitiated circulatory fluid in the muddy or yellow hue of the skin and eyes, albuminous urine, hemorrhages and very often unmistakable imminence of death. In dengue this is far different, the skin is not yellow, the pulse is not shattered, the urine is not albuminous. I make this last statement with especial emphasis in so far as my own observations are worthy of reliance. During the present epidemic I have examined the urine in the worst cases which I have treated, but in no solitary instance have I been able to find a trace of albumen.

Dr. d'Aquin makes a point in the differential diagnosis of dengue and yellow fever, in the fact, as he states it, that the pulse in dengue correlates with the fever—that is, it obeys the usual pathologic law, that there should be an increase of about ten beats in the pulse for every degree of temperature above the normal, while in yellow fever the pulse is apt to diminish in frequency while the temperature increases. We are indebted to Dr. J. C. Faget for the elucidation and promulgation of this law of yellow fever, which appears to separate it so definitely from other forms of fever. But, while yielding him the meed of credit he deserves, let us not be led into error by supposing that the law is not very often set aside. In the first place, the physiologically rapid pulse of childhood is very likely to override the effect of yellow fever poison in slowing the pulse rate. In the second place, every medical observer knows that in malarial fevers especially, but sometimes in other forms of fever, the heart is slowed in its action by some not well understood conditions of blood in purity—perhaps the diffusion of bile acids, to such an extent as to contaminate it. I have in this hospital counted a pulse of thirty-eight to the minute, in a well marked case of remittent fever.

The eruption of dengue is a more constant symptom than some observers suppose. In some cases it is taken for tropical lichen

In others it is not found, because the cases are dismissed from treatment before its appearance. It varies in characteristics. Dickson enumerates as many as ten varieties. In my practice it has more frequently appeared as an efflorescence, either general or existing in patches, various in size and shape. But I have seen it papular in form. In the West Indies the eruption is sometimes so intense as to occasion death. I have in my possession large pieces of desquamated cuticle, such as we may have in scarlet fever, said to have been obtained from a dengue patient.

Such a serious array of symptoms as the pain, the fever, and the eruption of dengue present, could not be expected to exist without greater or less disturbance of the whole economy. We often find the mucous membrane of the fauces, and occasionally that of the air passages, involved in an inflammatory process, which, although seldom acute, adds very considerably to the patient's annoyance. Vomiting is an extremely common symptom, and the mouth is pervaded during and after the attack, by a wretchedly vitiated and disgusting taste. Of course, complete anorexia exists, and if you add to this insomnia, whose duration is measured by days, rather than hours, it helps you in completing the portraiture of dengue.

You will perceive that I have been quietly drawing you to a portion of my lecture to which I invite your most earnest attention. This is, the comparison between dengue and yellow fever; whether in symptomatology or pathology. We are often called on to make differential diagnoses, and sometimes required to do so when important interests are at stake. Gentlemen, the susceptibilities of commercial communities are extremely tender on this point. I may also say that the machinery which history paints of the inquisition of former days, scarcely surpassed in power to inflict hurt and annoyance, the press of the present day. You may be placed in conflict with this power by your decision as to diagnosis. But let us always strive to cultivate and declare *truth*, whatever may be the consequences. During the most solemn trial earth ever witnessed, "jesting Pilate" exclaimed, "What is truth? and paused not for an answer." But we search for truth in a different spirit. In medi-

cine, truth—that positive truth—which implies acknowledge of all law, order, design and circumstances, which may ever affect the human economy; and also a knowledge of the power and means which will convert hurtful conditions into healthy states, and lastly, that moral state which influences one to cling to this beautiful and noble abstraction—this is the physician's realization of truth. Of course, no finite mind can fully reach such perfection, which belongs alone to Deity. But we can so shape our paths that their parallelism to truth will command the respect of all, and at the same time gratify our own laudable personal ambition.

You, as students, have two modes of studying the truths of practical medicine. First. Your own observations; this is a tedious method, but ultimately bringing good results. It belongs to your future. The second mode is to utilize the observations, lore and conclusions, of those of our profession who have investigated the subjects in regard to which you are seeking information. This work is for your present. I have made these remarks preparatory to a declaration that I shall, in the coming portion of this lecture, occupy grounds and announce opinions quite strongly opposed by some leading and excellent members of our profession. While I am convinced of the correctness of my conclusions, otherwise I would not announce them, I wish, as a matter of candor and justice to my brethren, to give you these facts in regard to dissenting opinions, in order that you may in future, investigate and decide for yourselves.

I now proceed to call your atention to the points of resemblance and dissimilarity between dengue and yellow fever:

First. They are both civic diseases, invading towns rather than isolated habitations.

Second. Their territorial areas of distribution are, in the Western Hemisphere, very nearly identical. But, on the other hand, dengue has often prevailed in countries where yellow fever is entirely unknown.

Third. Their climatic eras of prevalence have great similarity. Dickson, it is true, makes a point here, in saying that dengue made its appearance earlier than yellow fever, but the latest observations have probably weakened this conclusion.

Fourth. Epidemics of dengue are often spoken of as harbingers of yellow fever epidemics. The most reasonable conclusion is, that these epidemic visitations of the two diseases have no other relation to each other than mere coincidence of time and locality.

Fifth. Yellow fever and dengue have been regarded as convertible diseases. It is not unnatural for some observers, looking at the suddenness of the attack and the monoxysmal paroxysm of fever, to say, "mild yellow fever is dengue, and severe dengue is yellow fever." Others, again, have contended that the two poisons special to each disease, might in some manner, enter into combination, and thus produce a "tertium quid" in the list of morbific causes which would occasion a hybrid disease or spurious yellow fever. To me, gentlemen, there is but one yellow fever, however masked or ambiguous the symptoms may be in some individual cases. I know of no facts showing that specific disease poisons are capable of forming combinations outside the human body, and do not believe in any doctrines so incapable of proof and so improbable. I do, however, know that two, and possibly more than two, very different specific poisons may coexist in the human system, and give rise to mixed symptoms and mixed pathology. I shall certainly not deny that this may be true of dengue and yellow fever. In ward 20, bed 300, you will find a patient whose records of temperature show the markings of dengue for five days after admission, after which sharp diurnal curves prove conclusively that swamp poison was then ruling the pathology.

Sixth. I distinctly assert that the vast preponderance of medical testimony will support the opinions I advance to you that yellow fever and dengue each has its own specific poison, producing each its kind in perfect obedience to the laws of genesis. The difference between the two diseases is a difference of life and death. I never saw a death from dengue in my whole professional life. I have seen multitudes die from yellow fever. In 1850 from eight to nine thousand persons suffered attacks of dengue in Augusta, and Dr. Campbell reports that he heard of no death. In 1873 scarcely less than

forty thousand persons suffered attacks in this city, and if I do not mistake, only two deaths were ascribed to dengue.

Seventh. Dengue is diffused both by portation and atmospheric agency. The tendency of modern belief is that dengue poison is principally, if not wholly diffused by the air aided by certain unknown climatic influences. But Dickson states that the disease was brought to Charleston by a sick captain in 1828 and Dr. Smart shows that it was carried from Aden to Bombay in a troop ship in 1871.

Eighth. The point of greatest interest to you is the decision of the question. Is dengue a hemorrhagic disorder—that is, does its morbid process necessarily involve a hemorrhagic tendency, like yellow fever, or some other diseases in regard to which we know this to be true? You will find medical history in respect to this question very inconclusive. In truth, I think no person is capable of deducing correct lessons from the history of dengue in relation to hemorrhages unless he has a competent knowledge of all concomitant epidemics, and of the pathological states of individual patients. Rush, in describing his observations of "breakbone" fever in Philadelphia, says: "In some cases the discharge of a few spoons full of blood from the nose, accompanied a solution of the fever on the third or fourth day, while in others a profuse hemorrhage from the nose, mouth and bowels, on the tenth or eleventh day, preceded a fatal issue of the disease." It is very obvious that Rush had to deal with some other epidemic coincident in time with dengue. Indeed, it is doubted by some—a doubt in which I do not share—whether the "breakbone" fever of Philadelphia was dengue at all.

Dr. Fenner, a name venerated in this city, quoted as follows from Dr. Wragg's account of the epidemic of dengue in Charleston in 1850. "Hemorrhages from the mucous surfaces were very common. I have seen them from the nose (in some instances very profuse), gums, tongue, fauces, stomach and bowels. They were not usually, however, excessive or obstinate."

In commenting on this report, Dr. Fenner says: "Here we have a striking resemblance to our fever in New Orleans, and we regret that the doctor did not give a more particular ac-

count of the cases with *hemorrhage from the stomach.* We should like to know the difference between the ejecta in these cases and the *black vomit* of yellow fever. Among the hemorrhages so common Dr. Wragg does not mention uterine." Now it is a fact well recognized that during the warm periods of the year yellow fever cases are possible or even propable in their occurrence in both Charleston and New Orleans. I have no authorities at hand which enable me to say whether the disease actually existed in Charleston in 1850 or not, but in New Orleans one hundred and seven deaths are officially ascribed to yellow fever during that year. Dr. Smart, writing of the disease in South America, makes the following statement: "It disappeared from Lima in July, but re-appeared in January, 1853, attacking many previous sufferers, and generally unattended by the roseolous eruption. At the middle of March Dr. Smith attended the first case seen of "black vomit with jaundice," such cases being rare that summer. In January, 1854, yellow fever of a very fatal type ravaged Callao and Lima, continuing through the summer, from which the attacks of the milder form of the previous summers afforded no immunity. It ceased on the advent of the cool season and was unseen there in 1855. In the following summers till 1857–58, this epidemic made successive outbreaks on different sections of the Andes in which climatic influences served greatly to modify its severity. Thus in the dry provinces of Piura, next the Equator, it did not reach the fatal climax of black vomit, and although hundreds of cases were introduced into the city of Arequipa, in the midst of a dry volcanic oasis, no new cases were known to have sprung from them; higher up the mountain range, however, at Cuzco*, 3000 feet above the sea level, it proved to be of the most fatal type." To what extent this epidemic of dengue was co-existent with yellow fever cannot be ascertained. It must be borne in mind that Dr. Smart is a convert to Humboldt's belief that yellow fever was limited in altitudinal range to less than 500 feet above the sea level. Facts have long since established that this observation is incorrect.

*Cuzco is stated to be 11,380 feet above sea level.

My conclusions then are that medical history does not show dengue to be attended by black vomit, or other serious hemorrhages except under circumstances where yellow fever cannot be excluded to an absolute certainty.

Turning now from the medical history of dengue to a process of inductive reasoning as a method of testing its claims to be classed among hemorrhages inducing fevers, I call your attention to the pathology of hemorrhage in fevers.

Hemorrhages may be produced in fevers from either one of three causes. 1st. Increased physical pressure upon blood vessels causing their rupture. 2d. Innutrition of solids involving fragility of vascular walls so that rupture is a more likely event. 3d. Alterations of blood which favor its escape from the vascular system after rupture. More than one, indeed all these various factors may co-operate in the production of a hemorrhagic diathesis.

In regard to the first-named cause the increased strain due to the febrile state arising from any cause whatever, may occasion hemorrhages from the nose, the uterus, the lower bowels, and it may be occasionally from the stomach, if violent retching has attended the case. In my observation dengue is no more liable to these accidents than other equally intense febrile diseases. You will remember that one of the patients, now in your presence, having a bed in ward 16, had very suspicious oozing of blood from the mouth, but a careful examination proved that it came fr m an ulcer outside the last molar tooth in the upper dental arch.

When I come to lecture upon hemorrhage in malarial diseases, I shall discuss the questions involved at considerable length. But I must be permitted to say here that I have never witnessed serious hemorrhages accompanying malarial attacks in regard to which, a correct clinical history did not involve more or less chronic cachexia from malarial toxæmia. Even under these circumstances, when hemorrhages do attend malarial fevers, the rule is that one structure, or one surface shall alone be the seat. During a practice of thirty-eight years I have seen a vast amount of malarial disease, and at this moment cannot recall a solitary instance of typical black

vomit where yellow fever could be rigidly excluded. I do not, however, deny the occurrence of such cases, but only lay before you the kind of "luck," good or bad, of my practical experience.

But yellow fever is a typical hemorrhagic disease, and assuredly owes that feature to a combination of all the factors previously mentioned. First. Obstruction and consequent pressure on blood vessels from within. The stress of this pressure is upon the capillaries of the system; witness, blood stasis in all superficial capillaries. Second. Innutrition of solids—rottenness of structure; witness, fatty changes as a quite sure, and often early event, in bad cases. Third. Alterations of blood, favoring its escape from weakened or ruptured vessels; witness, tendency to gravitation and diffusion through all structures in dependent parts of the body. This alliance of morbific factors makes yellow fever the type of hemorrhagic fevers.

I wish now distinctly to impress your minds with one undeniable fact: Hemorrhagic fevers are dangerous to life. It is absolutely impossible that any other postulate can be sustained. Those conditions of perverted physiology, and perverted chemistry, which induce the hemorrhagic diathesis, must entail collateral derangements and consequences of a perilous nature. Abortions are the rule; for the nutrient processes of the system are so much interfered with, that death and extrusion of the foetus are inevitable necessities. I have never seen abortion in dengue in my whole professional life.

In conclusion, therefore, I make the following declarations:

1st. I have never seen albuminous urine in dengue, and know of no clinicle records which support a belief that it is liable to occur.

2nd. I have never seen abortion in dengue, and am well satisfied that dengue is no more liable to produce abortion than other febrile states.

3rd. I have never seen black vomit in dengue, nor any satis factory evidence to show that it is a hemorrhage inducing fever.

4th. Hemorrhagic fevers are fatal fevers; dengue never kills, except through complications.

5th. Malarial fevers may produce slight hemorrhages in primary attacks, but to induce well marked tendency to hemorrhages, chronic toxæmia must intervene, and weaken blood vessels to such an extent that they are liable to rupture.

6th. A differential diagnosis between dengue and yellow fever is often impossible in the early stage of the paroxysms but as the cases progress the lines of divergence in symptoms become obvious, and usually very striking.

7th. I have highly esteemed confréres in this city who differ widely from me in these conclusions. Some of them think that black vomit is no uncommon event in dengue. Gentlemen, there is no principle which should be considered more sacred to the professional life of physicians than that every practitioner should be a law unto himself, making his own diagnoses in obedience to his own honest convictions. As private practitioners we must constantly respect and observe this rule. But it may occur that some of you may obtain reputation as sanitarians and be selected to positions in which you are expected to become the guardians of public health and to give warning of the approach of dangerous diseases. Under these circumstances if you hear of a fever of one paroxysm with black vomit and albuminous urine, you are as much warranted in crying out "cavé serpentem" as the backwoodsman would be in warning you if he supposed he heard the rattle of the horrid crotalus, which, however, might afterwards prove to be the chirrup of the harmless cricket.

In respect to treatment, I have but little to say. A gentle cathartic in the early part of the clinical career, opium, in combination with chloral or bromide potash and quinine, comprise the pharmaceutical armamentarium. Warm baths, frictions, coddling, diet and stimulants, and keeping the patient in doors until recovery is complete, constitute the hygiene of the sick room.

(This lecture was delivered without notes, but the students who heard it will see tha the facts and line of argument are the same presented to them. The language employed is often different, but has been closely followed where memory has enabled me to do so.

Extra-Microscopic Organisms.

By STANFORD E. CHAILLÉ, M. D.,

Professor Physiology and Pathological Anatomy, Medical Department Univ. La.

Those opposed to the germ-theory of disease, and especially to the application of this theory to yellow fever, abuse no argument so frequently and so satisfactorily to themselves as the one implied in their triumphant assertion that no such germ is demonstrable by the microscope; and they illogically neglect to contrast this negative argument with its equally unsatisfactory alternative, which is that the microscope, as well as chemistry, and all the appliances of physics, have also failed to demonstrate that the poison of yellow fever is either an inorganic, or a dead organic something. Now, the poison must be one of these three things, and in addition to other arguments, urged in the October number of this journal, in proof that, of the three possible hypotheses as to the nature of the poison, the germ-hypotheses was now the most rational, it will be well to understand what reasons there are, from an exclusively microchemical standpoint, for the belief that there may be living organisms very much more minute than the microscope can disclose. Confidence is felt that these reasons suffice to prove that a belief in the existence of living organisms invisible to the highest powers, attained or attainable by the microscope, is just as logical as is the universal belief in extra-microscopic atoms and molecules.

Living protoplasm is composed of atoms and molecules, and the chemical constituents of protoplasm are approximatively well known; hence, if the size of atoms and molecules, and if the least number of these indispensable to form an independent living organism, were known, it would be possible to determine how small may be the minutest organism. While science is unprepared to answer with any precision such question, it, none the less, has reached, through reasonable hypotheses, approximative conclusions, which give no countenance to the common incredulity and ridicule respecting the possible minuteness of disease-germs, and which deserve to be better known.

Since Sir Wm. Thompson's effort to determine the probable

"size of atoms" (Nature, March 31st, 1870), numerous other researches have been made on the subject, all tending to prove the almost inconceivable minuteness of atoms and molecules. The results of these researches, so far as they concern the present subject, have been instructively summarized by one of the highest authorities in this matter, namely, by H. C. Sorby, F. R. S., etc., in his anniversary address, as President of the Royal Microscopical Society, on the "Relation between the limits of the powers of the microscope, and the ultimate molecules of matter." (Nature, February 24th, 1876.)

Prof. Sorby teaches that "the *theoretical* limit of distinct visibility" is $\frac{1}{80,000}$ part of an inch, and that the perfected microscope of the present day has *practically* reached this limit, (some claim that even $\frac{1}{100,000}$ of an inch has been reached), so that no further improvement in this direction can be hoped for. Properly emphasizing the fact, that all calculations, respecting the size of atoms and molecules are, within certain limits, hypothetical, he none the less says: "we must conclude that in the length of $\frac{1}{80,000}$ of an inch, (the smallest interval that could be distinctly seen with the microscope) there would be about 2000 molecules of liquid water lying end to end, or about 520 of albumen. Hence, in order to see the ultimate constitution of organic bodies, it would be necessary to use a magnifying power of *from* 500 *to* 2000 *times greater* than those we now possess. These, however, for reasons already given would be of no use, unless the waves of light were some $\frac{1}{20,000}$th part of the length they are, and our eyes and instruments correspondingly perfect. It will thus be seen that, even with our highest and best powers, we are about as far from seeing the ultimate structure of organic bodies, as the naked eye is from seeing the smallest objects which our microscopes now reveal to us. As an illustration, I have calculated that, with our highest powers we are as far from seeing the ultimate molecules of organic substances, as we should be from seeing the contents of a newspaper with the naked eye at the distance of a third of a mile; the larger and smaller types corresponding to the larger and smaller molecules of the organic and inorganic constituents." Farther, "calculating then, from the various data given above [omitted in these citations], we may conclude that a spherical particle

one-tenth the diameter of the smallest speck that could be clearly defined with our best and highest powers might nevertheless contain *no less than one million* structural molecules." Finally, Prof. Sorby says: "For the sake of argument, I assume that gemmules [a term used in Darwin's theory of pangenesis], on an average contain one million structural molecules of albumen, and molecularly combined water. Variations in number, composition and arrangement would then admit of an almost infinite variety of character. On this supposition, it would require a *thousand gammules* to be massed together into a sphere, in order to form a speck just distinctly visible with our highest and best magnifying powers."

Those who have been students of the phenomena dependent on the so-called "infinite divisibility of matter," and who are at the same time familiar with such considerations as the above, are surely pardonable for condemning, as an ignorant prejudice, the view that there cannot be any living organisms too minute for disclosure by the microscope; and, also, for condemning, as lacking in true scientific spirit, those who, objecting to the germ-theory, neglect to state whether the same, and even greater objections, do not hold equally good against any other conceivable theory.

While long convinced that the germ-theory of yellow fever rests on firmer ground than any other theory, I none the less have always entertained and expressed no present hope of the microscopic demonstration of this supposed germ. For, among other reasons, there has seemed to me to be little reason to hope, that the less numerous and less experienced microscopic experts engaged in researches on yellow fever—a disease which presents comparatively most unfavorable opportunities for study—would be likely to attain success, prior to the attainment of success in such diseases as small-pox, measles, scarlatina and typhoid fever, diseases which there are, perhaps, equally good reasons for believing to be germ diseases, and which so occur that more numerous and experienced experts have comparatively the most favorable opportunities for their study.

It may be well to add, that preceding facts and views constitute an addendum to my article in the October number of this journal, rather than an independent article.

Aihun.

By DR. JOHN DELL' ORTO, New Orleans, La.

Read before the N. O Medical and Surgical Association, October 9th, 1880.

I am sorry that my turn of speaking before the Association came this time so soon and unexpected, that I was unable to prepare the paper that I intended to read in continuation of my last lecture of the month of May—that is, on my clinical observations on the use of antagonistic medicines in the treatment of pulmonary and heart diseases, as suggested by Dr. Fothergill, of London.

In order, however, to perform the duty I was called upon this evening, I will read a few notes that I have recently taken from the report of the works done by the Imperial Medical Academy of Rio Janeiro, during the year 1875-76, made by its worthy Secretary, Dr. José Pereira Rego Filbo, and sent a few months ago to the State Medical Association of Louisiana. It is a valuable book, full of erudition and good critic, containing many interesting and useful subjects, among which the one that more especially attracted my attention, is an extract from a paper read by Dr. Josè Pereira Guimaràes, on a strange disease, very little known yet to the profession, and not classified either in the medical literature.

Aihun, is called in Brazil, a disease peculiar to the negro race of that country, which affects the small toes of the feet.

It is, according to the opinion of Doctor Guimaràes, a *sui generis gangrena*—a steady, slow, mysterious work of decomposition, only limited to the small toes of the feet, probably due to the lack of nourishment of these parts, that causes a retrograde metamorphosis in them, and gradually their final elimination from the body, without giving much trouble, at least in the commencement, to the general system.

The disease never appears among the white people. The first who called the attention of the medical world in Brazil was Doctor Moncorvo de Figueiredo. In a paper read before the Medical Academy of Rio Janeiro, in 1874, he related a case operated by him, and presented, at the same time, the pathological specimens.

Farther investigations were since pursued by other distin-

guished practitioners of that empire, such as Doctors Silva Lima, and Domingos de Almeida Martins Costa.

Later, Doctor Guimarães, has discovered an exception to the rule—that is, he had a case in which, not only the small toes were affected, but also the fourth.

The proximate cause of these strange phenomena, is supposed to be in the contracture of the arteries that nourish the toes.

Not much is known with regard to the treatment of *aihun.*

"The carelessness of the patients, says Doctor Guimarães, "the difficulty of persuading them to commence a treatment "immediately after the appearance of the first symptoms, are "the principal reasons why nothing, so far, has been tried to stop "its march. Perhaps little or nothing can be obtained with "medicines in this disease, in which nature proceeds with such "a curious and mysterious way. Doctor Silva Lima made once "a longitudinal incision in one toe, in which the disease was "just commencing. I do not believe that this operation, that "is also recommended by Dr. Mirault d'Augers, may be of any "use. Lately in a patient of mine, in whose toes I noticed an "ulceration, I obtained a rapid cicatrization by applying a "simple poultice of mandioca flour and honey. This seemed "to stop the progress of the *morbus*, but I am satisfied, that it "is not cured, and probably ere long nature will continue its "pathological work.

"Electricity by the induced current applied to the spine, "legs and toes, may perhaps give good results. This agent "that has been found so good for the treatment of local asphyxia "by Maurice Maynaud ought to be tried.

"The future will resolve the question."

I regret very much, gentlemen, that the paper of Doctor Guimarães is not published in extenso in this book—there is only as I told you before, an extract.—I am consequently unable to give you more detailed accounts of the most important facts connected with this curious disease. Nevertheless, I hope, that these few remarks will be sufficient to give you a correct idea of what the *aihun* of Brazil is, and to engage us in investigating, whether this pathological peculiarity may exist among our colored people.

I consider this question of great interest for the physicians of the South. As inhabitants of a country where the negro race is an important part of the population, it is good, that we know the diseases to which it may be liable in preference to the white race.

The Nictitaling Membrane in Man.

By JOHN DELL' ORTO, M. D.

Read before the N. O. Medical and Surgical Association, October 9th, 1880.

I am glad, that this subject offers me the opportunity to speak now of another peculiarity—this is a physiological one—that has been lately discovered on two negro women by Doctor Giacomini, the actual Professor of Anatomy of the University of Turin (Italy).

At one of the meetings of the Academy of Medicine, of last year, he said that at the autopsy performed on these two persons (who were mother and daughter) he found in the semi lunar folds of the conginutiva, or third eye-lids, the same cartilage, common to birds and some small mammifera. It has been generally admitted, that this cartilage does not exist in apes and man, in whom the semi-lunar membrane is constituted by a folding of the conginutiva with the interposition of a composed connective tissue. But during the last few years Professor Giacomini had the occasion to observe with the microscope transversal sections of the semi-lunar folds of the eyes of one *ourang*—of two *cercopiteci* and of one *cinocephalus*—and he found in every one the same small quadrilateral cartilage, that he found in those two women. These facts induced him to investigate on white people– in 320 eyes (from 160 white persons) he found the cartilage only in one instance.

Here is, Mr. President, another question of no small interest for the comparative anatomy of the human races, on which I am pleased to call the attention of the New Orleans Medical and Surgical Association, and more especially of the Anatomists, who are at the head of the Medical School, and of the Hospitals of Louisiana. I believe, that we have here a larger field for such kind of investigations, than perhaps in Europe.

October 9th, 1880.

Poisoning with Ergot.

By DR. M. F. LEARY.—Gaylord, Kansas.

November 12, at an early hour in the morning, I was summoned to Mrs. W— and found that she had aborted an hour previous a three months' fœtus with but an inconsiderable hemorrhage. The membranes had come away, the external os was patulous, but the uterus quite firmly contracted. The lady had borne two children to full term, and this was her first abortion. She had been in poor health for a year, dating from an attack of acute rheumatism. As there was still some flowing, I administered a small dose of Ergot and, after remaining an hour, left her to attend another call, her pulse and general condition being perfectly satisfactory. While at the house I prepared a soporific and left it with her husband with directions for its use, and later I discovered that I had forgotten my case vial containing ergot, but being pressed for time did not return for it. Two hours after leaving Mrs. W— I was again summoned to her bedside to find her pulseless, her skin blanched and the extremities cold. The action of the heart was very feeble and rapid, the breathing slow but not labored. She complained of a buzzing sound, very distressing, in her ears, and appeared somewhat stupid, but otherwise her mind was not affected. There was no nausea or tendency to syncope when in a recumbent position. An examination revealed the fact that there had been no flowing during my absence. The entire uterus was firmly contracted, and was the seat of considerable pain. On enquiry I learned that the husband had mistaken my ergot vial for the one containing the soporific, and had given his wife teaspoonful doses of its contents, every half hour till it was empty. She had therefore taken *half an ounce of Squibb's extract of ergot.* He stated that her pains (of which she was quite free when I left her) came on shortly after taking the first dose, and that each succeeding dose seemed but to aggravate them; that the symptoms of collapse set in very suddenly after the last dose, some twenty minutes before my arrival, that she had taken nothing else, with the exception of water, and had not moved from the position in which I left her. I was fully convinced that her condition was produced

solely by the *ergot*, and this conviction was strengthened by noting its powerful action on the uterus. Satisfied that the ergot had "done its worst," I assured her friends of her safety and employed only frictions and heat to the extremities and small quanties of wine *per orem* at intervals. In the course of three hours there was a sensible pulse at the wrist, but it was fully nine hours till it had recovered its volume before taking the ergot. The reaction was attended with a slight fever, but no other unpleasant consequences resulted, and she had a rapid getting up.

While it is not pleasant to acknowledge "sins of omission," I have been particular in detailing this case as proof that ergot is not always a safe agent in heroic doses. I made no notes of the case at the time, and have to depend on my memory for the points. My attention was called to it again, recently, by an article in the (N. Y.) *Medical Record*, of September 18th, 1880, by J. M. Keating, of Philadelphia, who reports a case of "ergot poisoning" (unattended by fatal results), in which, after the removal of an adherent of placenta, *half an ounce of the fluid extract of ergot was taken in two hours*, in divided doses, followed by symptoms resembling those observed in Mrs. M—'s case, but not so severe in character. It will be noted that in both cases the same quantity was taken, and in about the same time, the one being the *fluid extract*, the other *Squibb's*.

In the "*Record*" of October 23rd, S. J. Radcliffe, of Washington, in commenting on Dr. Keating's case, states that in his own practice, in a placenta previa, "he gave teaspoonful doses of Squibb's ergot every half hour," and that "one and one-half ounces were taken in twelve hours, without injurious effects," and expresses the opinion that the symptoms obtained in the case reported by Dr. Keating were due either to idiosyncrasy or the hemorrhage following the removal of the adherent placenta.

In the case of Mrs. M——, the question of idiosyncrasy is eliminated, as she had previously used ergot in two cases of labor, without any unfavorable symptoms supervening, and the abortion was attended with neither hemorrhage or shock that would account for her condition on my second visit.

I can find but little literature on the subject of ergot poisoning in the human family. Dr. Hood records a case in which "great prostration and almost absent pulse" followed its use. In large doses, it is said to produce fullness in the head and vertigo (a statement requiring verification) and, except in parturition, it is generally considered a safe drug. I frequently have used Squibb's extract in drachm doses, in hemoptysis and cystitis, and never experienced trouble from it. Will some of our professional brothers of the South, where, from physiological reasons, ergot is more employed in parturition than it is in the North, give us their experience with it?

Epithelioma.

A CLINICAL LECTURE DELIVERED AT THE CHARITY HOSPITAL.

By T. G. RICHARDSON, M. D.,

Professor of Surgery in the Medical Department of the University of Louisiana.

Gentlemen:—The four patients whom I bring before you today are all the subjects of epithelioma, and illustrate as many phases or degrees of this interesting and not uncommon affection. But before pointing out the characteristics of each of these cases, permit me to make a few general remarks concerning carcinoma or cancer, of which this disease is considered a species.

Viewed from a clinical standpoint, cancer has been for nearly half a century divided into five distinct species, scirrhus or hard-cancer, encephaloid or medullary cancer, colloid or gum cancer, melanosis or black cancer, and epithelioma or skin cancer. Of these the first two are by far the most malignant —that is to say, they destroy life more rapidly than the others —and the last mentioned the least so. Until within a comparatively short time, they were all regarded by the leading pathological anatomists of Europe as well as of this country as constitutional dyscrasias, local manifestations of a specific blood poison and consequently incurable, in the strict use of this term, by surgical operation or any other local treatment. By a few writers and teachers a partial exception was made in regard to

epithelioma, but encephaloid and scirrhus were thought to be undoubted constitutional diseases of a specific nature, and, in the absence of any known antidote, inevitably fatal within a few months, or a year or two at the farthest. Within the past fifteen or twenty years however, a change of opinion has been taking place, and now among English and American writers, with the exception of Sir James Paget, notably the most distinguished surgical pathologist of modern times, scarcely one adheres to the old theory. I myself was indoctrinated with this belief by my private preceptor, that distinguished surgeon, Professor Samuel D. Gross, M. D., but yielding gradually to the growing weight of evidence to the contrary derived from my own observations and the recorded experience of others, I have now arrived at that point where I seriously doubt whether any one of the species mentioned is ever, at its origin or at any period of its development, constitutional, in the limited sense of that word. I do not deny that in the later stages of all of them there is a cachectic condition to which the term cancerous is nearly always prefixed; but it has yet to be proved that this condition is dependent upon a specific poison in the blood. I admit that there is at least one very strong argument in favor of this theory, namely, the frequent recurrence of the disease in some other, and, it may be distant part of the body, after its entire removal by operation from the point where it first manifested itself. But until we discover the cause of its appearance in the part first attacked, we are not justified in ascribing its subsequent occurrence in some other part to constitutional infection.

Epithelioma, is so called because of the resemblance of its structure, as seen under the microscope, to that of epithelial tissue. We now know that this is not simply a resemblance, but due to a close similarity in the composition of the two tissues. It occurs for the most part in persons beyond the age of forty, and is more common among men than women. It begins primarily in the skin or mucous membrane, and its favorite sites are the face, especially the lower lip, the tongue, the inside of the cheek, the rectum, the glans penis and the neck of the womb. It first shows itself in the form of a minute

nodule or wart-like thickening of the part; or more commonly still, in that of a small crack or fissure upon a slightly indurated base. In the former case ulceration takes place sooner or later; in the latter, ulceration is apparently the initial lesion, although, of course, morbid action, producing more or less thickening, precedes the break in the cuticle. In either case the ulceration has a tendency to spread slowly in a lateral direction, *always preceded, however, by more or less infiltration of the adjacent parts.* The shape of the ulcer is quite irregular; its edges are oftentimes ragged; its surface is excavated, covered with unhealthy granulations, and constantly moistened with a foul sero-purulent secretion. Unless accidentally inflamed, it is seldom the seat of much pain, except in the later stages of the disease, and not always then, as you will be presently informed by the patient upon the table before you. Its progress is usually slow, but in the course of time it may attain a great size, sometimes involving the entire scalp, at another, nearly the whole of one side of the face; or, again, extending throughout both of the nasal cavities, as far back as the pharynx. It is quite prone to bleed after it attains a considerable size, and the daily loss of blood is very commonly the principal cause of the deterioration of the general health which sometimes takes place before any vital part has been invaded. Indeed, this is nearly always the cause of death in those cases in which the disease has been allowed to get beyond the reach of remedial measures. Although intractability is one of its leading characteristics, a weak cicatrization occasionally takes place, only to disintegrate rapidly at some subsequent time.

Such are the principal features of the ulcer itself, but if you limit your view to these alone, you will only half learn what is desirable that you should know in order to determine the diagnosis, but more particularly still, the prognosis and treatment of this affection. As already stated, the disease in its earlier stages is limited to the ulcerated surface, and to a undefined band of thickened or infiltrated tissue circumventing the latter. The breadth of this band varies considerably in different cases, and at different stages of

the disease, being generally very narrow at the outset, but not less than a half or three-quarters of an inch wide at a more advanced period. This is an essential fact to be always borne in mind in canvassing the question as to the propriety of a surgical operation. Indeed, this deposit is composed in great measure of the structural elements which distinguish the disease, and without it there could be no such ulceration as I have described. I do not propose in this lecture to give you an account of these elements, but must for the present confine myself to clinical facts.

Another and very important feature of the affection is its liability to multiply itself through the medium of the lymphatic vessels. This is not likely to occur, however, until the disease has made considerable progress, and taken hold of the tissues subjacent to the skin or mucous membrane. Then it is that the nearest ganglia in the course of the lymphatic vessels, become indurated and enlarged, and form tumors which are similar in nature to the thickened band by which the original ulcer is bounded. And here I may remark that such swellings are probably always secondary. According to my observation the true epithelioma seldom or never appears primarily in the form of a defined tumor, but as an infiltration in the skin or mucous membrane followed by ulceration.

As already stated the disease is undoubtedly local in its nature, and should be treated accordingly. You must not lose sight of the fact, however, that like all other local affections of a serious character, it is largely influenced in its development and growth by the general condition of the patient's system. Whenever, therefore, it shows itself, however limited may be its extent, it should be immediately attacked with either the knife or escharotics. When so situated that it can be entirely removed, together with a sufficient amount of the surrounding tissues, to make sure that the whole of the morbid deposit is included, the former method, embracing the use of the scalpel, scissors or écraseur, is much to be preferred. In other cases, where such operations are impracticable or undesirable, the diseased parts may be effectively destroyed by chloride of zinc, arsenic, caustic potash, bromine or some other one

of the violent caustics, care being taken not to apply these so freely as to destroy the adjacent tissues to an unnecessary extent. If after operating with the knife the edges of the wound can be brought together and union by the first intention secured, this is of course a great advantage, but in many cases this is impracticable, and the gap must be allowed to fill up by granulation, as after the application of an escharotic. Some of the most satisfactory results which I have obtained have been in cases where the extent of the wounds was so great as to forbid any attempt at approximation of the edges, granulation and cicatrization accomplishing all that could be desired. After complete extirpation of the morbid structure by the one or the other of these plans, I am in the habit of advising the internal use of arsenic in minute doses for many months. I am not sure that this medicine is capable of exerting any control over the recurrence of the affection, but, in common, with not a few other surgeons, I fancy that I have obtained such results. However this may be, the remedy is a most excellent tonic, and in many cases must affect good in this capacity if in no other.

If there should be a return of the disease the same rule of conduct should be observed as in the first instance. Unfortunately the recurrence is oftentimes not in the original site, but in some less favorable locality near by, especially in the adjacent lymphatic ganglia. In either case the disease may be so situated as to forbid any further interference. Two of the cases which I shall show you are examples of recurrence, in one of which a second operation will be performed, but in the other I fear that the disease is beyond my reach. In no one of the four is there any evidence of hereditary taint of cancer.

Let us now examine the patients with reference to the various points which I have indicated in these desultory remarks.

Case I. This man, from Professor Logan's ward, is as you see middle life, not beyond forty years of age. He has a small irregularly shaped ragged ulcer upon the right cheek, and he tells us that it has been in existence there for at least a year. It commenced as a little wart-like thickening in the skin, which after some months cracked and became covered

with a dry scab. When the crust dropped or was rubbed off, there was disclosed a small ulcer which continued to scab and to extend laterally until it has reached its present size. Upon close examination it is found to involve only the thickness of the skin, is unaccompanied by any well-marked induration of the surrounding tissues, and is not the seat of any pain. I can discover no enlargement of the sub-maxillary lymphatic ganglia. From its history and appearance, I have no hesitation in pronouncing it epithelioma. The only affection with which it might be confounded is chancre; but when you bear in mind that it has been in existence for several months; that none of the secondary symptoms of syphilis have shown themselves; that it does not rest upon an elevated bed of indurated tissue; and that it is a moist sore, you may dismiss this suggestion from the possibilities of the case. As the ulcer is small and very superficial, involving only the skin, there is scarcely a necessity for a cutting operation. If the surface and edges of the sore be destroyed by chlorids of zinc or caustic potash, the probability is that upon the detachment of the eschar thus produced, healthy granulations will spring up, and cicatrization ensue as in a simple sore. As there is no contamination of the adjacent lymphatic ganglia, recurrence of the disease elsewhere is not likely to take place. The disease may return in the cicatrix in consequence of failure to destroy all the germs of the disease in the surrounding skin; in which case it will be proper to repeat the escharotic, or, if the disease should then show a tendency to invade the deeper parts, it may be necessary to remove a section of the cheek with the knife, and unite the edges of the wound by suture.

Now and then a third operation is called for in such cases, as in that of a gentleman who graduated in this institution two years ago. While attending his last course of lectures he called my attention to a minute, circumscribed and slightly elevated thickening of the mucous membrane upon the edge of his tongue. It had been there for several weeks, was not produced by any known cause, and did not give rise to any pain; but it was evidently growing and threatened to ulcerate. I advised its removal; and lifting it

up with a pair of delicate mouse-toothed forceps I clipped it off with scissors, including as I supposed, a sufficient amount of the sub-jacent and surrounding tissues to ensure the removal of all the morbid element. The wound healed kindly, but several weeks afterwards, when the gentleman had graduated and returned home, the disease reappeared in the cicatrix. He wrote to me in regard to it, and in reply I urged him to have another operation performed as soon as possible. He followed my advice, and again the wound healed soundly. This was more than a year ago, since which time the parts remained in a perfectly healthy state, and the patient had laid aside all apprehension of a return, when only a few days since I received a letter from him informing me that the disease had appeared afresh in the original spot. I immediately wrote to him to lose no time in having a third operation performed, lest by procrastination the adjacent lymphatic ganglia might become involved. Notwithstanding the repeated recurrence in this case, my confidence in the local nature of the disease is not in the least shaken. The result only proves that the incisions have not been made sufficiently far from the focus of the disease to include all the morbid cell-growth in the surrounding parts. The tendency to recur is no proof of constitutional infection, inasmuch as we often see the same after the removal of certain simple tumors, whose strictly local nature no one can dispute. The gentleman referred to may be obliged to submit to a fourth or fifth operation, but I am convinced that as long as the adjacent lymphatic ganglia remain unaffected, the disease may be entirely extirpated by a more liberal sacrifice of the surrounding *apparently* healthy tissues.

Case II. Here is a man seventy-five years of age in whom I find an ulcer nearly like the last and about the same size, but situated upon the inside of the cheek, and involving, as well as I can judge, about one-half of its thickness. It is accompanied also by an enlargemant and induration of one or more of the sub-maxillary lymphatic ganglia. He informs us that a similar disease, produced he thinks by smoking clay pipes, existed on his lower lip, which was removed by a New England surgeon seven months ago. It is evident from the present ap-

pearance of the lip that the operation was well performed, but only two months afterwards the disease developed where you now see it, the old cicatrix remaining perfectly sound.

At our next meeting I shall cut out a section of the cheek and bring the edges of the wound together with the twisted suture; and at the same sitting excise the indurated ganglia below the inferior maxilla. Notwithstanding this man's extreme age, he is possessed of an excellent constitution, and there is good reason, therefore, to think that he will make a speedy recovery.*

Case III. Many of you will recollect having seen this patient toward the close of the lecture term, in March last. At that time he was the subject of a tolerably large ulcerated epithelioma situated far back upon the left side of the tongue, involving the entire thickness and one-half the breadth of this organ. The patient is about forty-five years of age, and dates the first appearance of the disease two years and a half ago. As there was no involvement of the cervical ganglia, and no visible impairment of the general health, I determined if possible to get rid of the local disease by some means or other, and thus protract the patient's life. The situation of the morbid growth precluded the employment of the more powerful escharotics; and the weaker ones, such as the mineral acids, would have proved worse than useless. The same objection applied to the thermo-cautery, and the question then lay between the removal of the entire organ near its connection with the hyoid bone, or ablation of the diseased part by the knife, ecraseur or wire cautery. I decided upon the latter plan and chose the ecraseur in preference to the knife, in order to avoid as much as possible the hemorrhage from the lingual artery, which would be necessarily divided. The wire-cautery was rejected in consequence of the risk of burning the surrounding parts.

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*The operation was subsequently performed by the removal of a tolerably large segment of the cheek. The twisted suture was used, and the wound healed by the first intention. In excising the indurated lymphatic ganglia it was found that the submaxillary salivary gland was similarly affected, and it became necessaay, therefore, to cut away a greater part of it. The facial artery was tied and the wound, which was stuffed with lint, was, when last seen, closing up apparently by healthy granulation.

I need not go into the details of the operation, which you remember was exceedingly difficult, bloody and protracted. However, the object was finally accomplished, and the large, gaping wound was packed with lint wet with a solution of perchloride of iron. Granulation and cicatrization subsequently occurred, and I lost sight of the patient until a few days since, when he presented himself at my office, with the large, prominent swelling which you see upon his neck just below the angle of the lower jaw. This, he tells me, made its appearance about two months after the operation. Upon examination, I find the depressed cicatrix upon the side of the tongue perfectly sound, but it is quite evident that the disease has attacked the adjacent deep lymphatic ganglia of the neck. Here, then, we have epithelioma in the form of a tolerably well defined swelling; but bear in mind that this is the secondary manifestation of the disease, the primary having appeared as an infiltration and ulceration of the mucous membrane of the tongue. The tumor is hard, inelastic and almost immovable. It is attached firmly to the cervical vertebræ and to all the surrounding soft parts, which latter, I am persuaded, from the sensation imparted to my fingers, are extensively penetrated by the morbid growth. As you observe, there is no ulceration of the surface, and the man seems to be in a fair state of health. And now comes the question—can anything more be done? As there is no contamination of the general system, so far as we can discover, why not remove the tumor with the knife, and give the patient another chance for his life? The objection to such a procedure is, that it would most likely prove rapidly fatal, in consequence of injury to the important blood vessels and nerves in this situation. These are, indeed, I am quite sure, involved in the morbid growth, and would, of necessity, be divided in such an operation. Moreover, it would be almost impossible to remove the whole of the diseased mass, owing to its infiltration of the surrounding tissues. The alternative of a lingering death from a most repulsive disease is sad to contemplate, but I do not see how such a result can be avoided.

Now that he has left the room, I venture to predict that the

poor man will soon fall into the hands of some one or other of the numerous empirical cancer-curers who infest the land; and that his death will be hastened by attempts to destroy the diseased parts by means of escharotics. It is only a few weeks since this occurred in the case of a young married woman, upon whose breast I declined to operate, in consequence of an advanced and rapidly growing medullary cancer. Death came to her relief after three days of exquisite torture from the application of a caustic paste. True to his profession, the inquisitor had the audacity to persuade the husband that the fatal issue did not result from the cancer, or his treatment of it, but from *congestion of the lungs, produced by a retroverted uterus pressing upon the aorta*—a condition which he said had been overlooked by her previous attendants.

Case IV. This, the last of the series of cases, exhibits the disease in a still more advanced stage. The patient is a Greek, seventy years of age. He is apparently in good general health, but you observe that his penis is deformed, knobby, indurated and extensively ulcerated; that the ulceration has invaded the scrotum, destroyed the left testicle, and is extending along the skin of the pubes. By a little pressure with my finger upon the perineum I can readily trace the induration into the bulb of the spongy body of the penis, and along the divergent legs of the cavernous body as far as their attachments to the corresponding ischia. I can in the same way detect extensive infiltration throughout all the neighboring parts. Along the lower surface of the distorted and partially destroyed penis, the urethra has been penetrated by the ulceration, and during micturition all the urine escapes through the artificial opening. Upon enquiry, I learn that the disease commenced in the head of the penis a little more than two years ago; was not the seat of pain or any other special inconvenience until a year since, when he was obliged to quit work and seek assistance. Various applications were made to the parts, and various medicines administered, but without benefit. The only thing which should have been done was left undone, and now when it is too late the poor man is brought to the hospital to die a lingering and disgusting death. If amputation of the penis had been performed in the early stage of the disease, the prob-

ability is that the patient would have escaped the miserable condition in which you see him, and, with his excellent constitution, have weathered the storms of several additional years. As matters now stand, all that can be done is to make him as comfortable as circumstances will admit, and allow the disease to do its worst.

Before dismissing the case, however, permit me to draw your attention to the fact that notwithstanding the extensive ravages of the disease, the patient exhibits none of that cancerous cachexia, as it is called, which is so often seen in the equally advanced stage of scirrhus and encephaloid, and which was formerly looked upon by nearly all pathologists as one of the proofs of the constitutional nature of these maladies. In like manner it is but fair to consider its absence, which is so marked in this case, as one of the evidences of the strictly local character of this affection.

Cases of Hemorrhagic Fever.

By W. H. WATKINS, M. D.

The extensive epidemic of a benign character through which New Orleans has just passed, has fully justified its physicians in giving the disease the appellation of dengue. A large number of the cases were undoubtedly characteristic; the pseudo-rheumatic pains; the eruption; the fever of one paroxysm; the remarkably rapid convalescence, all unite in giving the disease a *tout ensemble* not found in any other malady. But a large number of cases coming under my observation have either been preceded or followed by unmistakable symptoms of malarial poisoning, manifested by fever of an intermittent or remittent character, and the exhibition of quinine has proved of the highest utility. Hemorrhages were uncommon, save epistaxes when the invasion was abrupt, or the congestion of the skin marked.

Three cases of disease came under my observation, which presented the symptom known as black vomit.

Case 1. Female child of Mrs. W., aged — years, residence

on Josephine street, between Liberty and Howard streets, was taken sick September 18th; fever of one paroxysm; cough, rapid respiration. Child had yellow fever in 1878. Was called to see this case about fifteen minutes before death occurred. The child had passed no urine for 36 hours. Threw up black vomit copiously for six or eight hours before death. Was unconscious, and died in convulsions. Visited the house on the 13th September, twelve hours after death occurred, in company with Dr. Jos. Jones, President of the Board of Health. Rigor mortis not well marked. The body of a white tallowy color, lips pale, gums almost bloodless. The body presented at no portion the least tinge of yellowness. The appearance of the body, together with the confident assertion that the child had had yellow fever in 1878, and the absence of clinical observations caused me to give as the death certificate—congestive fever.

Case 2. Lizzie H., native of New Orleans, aged 11 years, was taken sick September 16th, 1880, at 8, A. M. Although a resident of the city since birth, and freely exposed to yellow fever, she had not had that disease.

Saw her one hour after she was taken sick. Temp. 103; pulse 110; great restlessness, face pale, but arms and legs presented a decided rosy blush skin hot and dry. Evening temperature 103½. Sept. 17th, temp. 103½, pulse 100; evening temperature 104. Sept. 18th, morning temp. 104, pulse 100. At 10 A. M., temp. 104¾, pulse 120; stomach very irritable. Complained of pain of a burning character in the epigastrium. When seen at 10 A. M., she had just had a paroxysm of vomiting and the rise of pulse is attributed to her exhaustion. The matter vomited during the day was the milk and seltzer water which she had taken. At night her restlessness increased and the vomiting continued. The matter vomited consisted of mucus with a number of black specks scattered through it. The masses of black substance were intimately mixed with the mucus and in some instances presented spots the diameter of a nickel. The urine which was passed in normal quantity contained albumen.

Sept. 19th, irritability of stomach had subsided. Tempera-

ture 104°, pulse 110. Evening temp. 104°. General condition had improved.

Sept. 20th, temperature had fallen to 102½. Evening temperature 103°; albumen continued in urine.

Sept. 21st, temperature normal; albumen present. Child expressed itself well and very hungry. Convalescence thus rapidly established was exceedingly rapid; within three days she was up from her bed and digested her food, which was freely given, without discomfort.

This case presented symptoms so analogous to those of yellow fever that the President of the Board of Health was notified of its existence and requested to visit it. The case was freely discussed and all the symptoms carefully weighed. The absence of congestion of eyes, redness of gums and tongue and the rapid convalescence after the appearance of such grave symptoms as black vomit and albumen in urine, precluded any probability of the case being one of yellow fever.

Case 3. Fred. A. Singer, white, aged 18 years and 9 months, a native of New Orleans, by occupation an assistant to a fresco painter, came from McComb City, Miss., Aug. 29th, 1880. He immediately repaired to the place where he died, No. 409 Liberty street, and commenced work under his uncle, Mr. H. He worked last at the corner of Louisiana Avenue and Chesnut street.

He came home after he had completed his work, on the evening of Thursday, Sept. 30th, 1880, and partook of a hearty supper. About 9, P. M., he was seized with a chill and vomited what he had eaten. He soon had a high fever. The fever continued unabated, and on Oct. 1st and 2nd, the nurse reports that his skin was hot and dry. On Oct. 2nd his restlessness was a marked symptom. At 1:30, P. M., this day he threw up black vomit and had retention of urine. Temperature 105°, pulse 100. At night his temperature was 105°, pulse 104. On Oct. 3d his temperatue was 105, pulse 106. Evening temperature 105, pulse 110. On Oct. 4th, at 8, A. M., his temperature was 105, pulse 110 at 3, P. M., temperature 104½, pulse 110. At that time he was sweating profusely, respirations 40 per minute, and death occurred at 10, P. M.

When first seen, October 2d, his eyes were affected and presented a congested appearance. His tongue was coated, with edges red. No albumen present in urine. He threw up black vomit several times before death, and passed black, tarry matters from the bowels in large quantity. On October 3rd, he had a passive homorrhage from the nose.

The retention of urine continued throughout his illness. The urine drawn from his bladder, twelve hours before death, was one third albumine. He was for forty-eight hours before death hard to arouse, very sluggish in doing what he was told to do, and had considerable delirium.

He had lived in New Orleans until three or four months before death. Had passed through the epidemics of yellow fever of 1867 and 1878, but had never had the disease.

He was seen, during his illness, by Drs. S. M. Bemiss, J. P. Davidson and F. Loeber.

Post-mortem examination held 10 hours after death in the presence of Drs. Bemiss, Davidson and Shepard. Rigor mortis well marked, hypostatic congestion considerable. Face and breast of a yellow color; lower extremeties natural. Conjunctiva slightly yellow. On opening the abdomen the adipose and cellular tissues were yellow. The liver was lighter in color than normal. The margin of the liver darker in color, tinted olive green. The gall bladder contained from two drachms to half an ounce of bile. The spleen was very small, weighing not more than three and a half ounces, was shriveled, wrinkled, and firm; cutting hard. The stomach contained about one ounce of black vomit; was contracted and presented hemorrhagic spots. Kidneys not examined as tube casts and albuminous urine had been found.

The body was buried at 10, A. M., Oct. 5th; after having been wrapped in a sheet saturated with carbolic acid. The premises where death occurred were thoroughly disinfected and fumigated by the Sanitary Inspector of the 1st District.

The burial certificate attested the cause of death to be yellow fever.

CORRESPONDENCE.

POINT MICHEL, LA., Nov. 10th, 1880.

Editors N. O. Medical and Surgical Journal:

Gentlemen—A communication having appeared in the November number of the JOURNAL which, though unsigned, is evidently from the pen of Dr. Sternberg, I hereby ask to be accorded the same privilege granted him, not for the purpose of engaging in a medical controversy, but in order to set myself right before members of the medical profession who may have read his letter.

Dr. Sternberg says in his opening paragraph that a letter of mine published in the *N. O. Picayune* demanded a notice from him and as he objects "to discussing professional topics in the newspapers," he asks to reply to through the JOURNAL. The idea sought to be conveyed, is that I was less ethical in that regard, but had he read further he would have seen that my letter was a reply to an official communication from the president of the State Board of Health, and appeared in the published report of the proceedings of that body. It is gratifying that a change of sentiment has taken place since the Memphis *Avalanche* letter in regard to this same fever. He inquires in how many instances the "usual tests" for albumen were applied. I reply, in most of the severest cases; including those that resulted fatally, I used nitric acid and heat to detect albumen. In the milder cases I did not deem it necessary.

I will make the following corrections of some errors which figure prominently in his letter: 1st. Of the thirteen deaths that occurred, three of the patients would not take either quinine or cinchonidia, which fact reduces the "large mortality" of "(about 6 per cent.)" to less than 5 per cent. under the quinine or cinchonidia treatment. 2nd. I did not tell him that "some physicians" regarded the cases I treated in 1878 yellow fever, but did say that one physician who had not seen any of my patients that season, expressed such an opinion. 3rd. The "little settlement" in the "infected locality" from which he counts 7 deaths, instead of containing a population "not ex-

ceeding 30 or 40 souls," as he states, has at least 175 or 200, in an area not exceeding a half mile above and below Giordani's house.

It struck me as somewhat singular that the communication of Dr. Sternberg contained no reference to the majority report of the commission sent by the resident member of the National Board of Health to investigate the fever in Plaquemines parish, and that he expressed himself as "anxious, in the interest of truth, that some competent person shall be sent to make an exhaustive study of this local epidemic."

As I said before, not wishing to engage in a medical controversy, I shall not reply to his efforts to make malarial fever change its hue, or his reasonings to show that I had been guilty of the same errors in diagnosis he admits, excellent though they may be. "The lady doth protest too much, methinks."

Very respectfully,

GEO. A. B. HAYS, M. D.

CURRENT MEDICAL LITERATURE.

ON THE CONTRA-INDICATIONS TO SURGICAL ANÆSTHESIA.

By Mr. Duret.—Thesis Analysed in the Archives Générales de Médicine for Oct., 1880.

Translated by THOMAS LAYTON, M. D.

The contra-indications to surgical anæsthesia have, at the present day, become very rare. This proposition seems demonstrated by the perfection of methods, the greater purity of the anæsthetic agents employed, and the fortunate results of numerous experiments essayed empirically under circumstances reputed dangerous. The difficulty, in preparing a memoir of the kind assigned to Mr. Duret, consisted in avoiding triteness; and the author, desiring to perfect his task, has succeeded in writing a useful and interesting monograph, thanks to many careful researches, of which the thesis shows evidence. "In order, says he, to treat thoroughly and fruitfully the thesis which was allotted to us, we were compelled to state clearly the question of the physiological causes of the accidents and of deaths due to anæsthetic agents, basing ourselves for this purpose upon the achievements of physiologists during the last few years [Claude Bernard's Lessons on Anæsthetic Agents, Mr. Vulpian's Communications to the Institute, and those of

Messrs. Bert, Regnard, Franck and Rabuteau, to the Society of Biology, and finally, the remarkable Thesis by Mr. Arloing of Lyons]; then, by studying and comparing clinical observations, as carefully drawn up as possible, to seek if, in this respect, there is identity between man and animals, to establish such differences as might be found to exist, and point out the share which *pathological lesions and pre-existing constitutional conditions* may have in producing disastrous results."

Anesthæsia is always a subject which implies the application of a poisonous substance to man; it is necessary to know how to measure its effects, and to avoid the dangers which may be incurred. Previous experiment is therefore indispensable, and the indications and contra-indications may already be established by the exact knowledge of its physiological action upon animals. With this object in view, in the first part of his thesis, which he styles: *Source of the contra-indications to surgical anæsthesia*, M. Duret sets forth clearly the dangerous physiological effects of anæsthetics; their action upon the nervous centres, according to Claude Bernard; upon the heart, which they may cause to stop beating through reflex-action, during the very first inhalations (*laryngo-reflex syncope*), or later after the lapse of a few minutes, when the vapors conveyed through the blood have had time to reach the Rachidian Bulb (*bulbar syncope*), and lastly, by *intoxication*, when saturation of the tissues occurs. The respiratory functions may also be affected, either simultaneously with the heart, or primitively, and there may also be observed apnœa, which may be either reflex, or bulbar, or toxic. The attention of the reader is summarily called to the modifications in the flow of the blood through the vessels, to the gaseous exchanges which take place in the tissues, to the lowering of temperature, and in a word to the useful results to be derived from the very precise and numerous researches made by French and foreign physiologists. For the sake of greater clearness, M. Duret has prepared a synoptical table of the physiological phenomena which occur during the administration of cholorform; a glance at this table will be found very instructive.

These experiments upon animals teach, as Flourens and Longet had already shown, that anæsthetic agents, penetrating into the blood through the lungs, impregnate the nervous centres progressively. The intoxication of the cerebral hemispheres reveals itself first by diffuse excitement of the various motor centres recently described as existing at the surface of the grey matter, these motor centres reacting without order and producing the muscular agitation which is noticed at the outset; then by stimulation of the psychical regions and those of special sense, which results in delirium, hallucinations and dreams, and occasions excessive loquacity; finally, during a second period, calm is gradually restored, and sleep and rest supervene.

Intoxication of the medulla shows itself in the final loss of sensibility (anæsthesia) in the regions of the trunk and limbs, in the loss of muscular and vascular tonicity, in the weakening of reflex action; when all this has taken place, muscular resolution is an established fact. The bulb alone does sentry duty and preserves life. Hence the importance of never allowing the poisonous agent to impregnate this watchful guardian to such a degree that its power will be anihilated. M. Duret says: "One will be warned of danger by a series of *premonitory phenomena*, which allow the anæsthetic action to be kept within bounds. These premonitory phenomena are the appearance of the face, the condition of sensitiveness, in which the zone depending upon the fifth pair of nerves is found to be (for it will be borne in mind that this fifth pair is the sensitive feeler of the bulb), special attention being paid to the cornea, the last point susceptible of responding to stimulation; the examination of the pupil, which is such an accurate anæsthesiometer as Budin and Coyne have shown; the attentive study of the heart's action and of the modifications in the pulse; and especially the incessant observation of the respiratory motions, through whose cessation life becomes extinct." M. Duret analyzes carefully these *premonitory phenomena* in their modifications, and shows how each of them may become the source of a contra-indication to the administration of an anæsthetic during an operation.

Surgeons, at all times, have been pre-occupied by the causes of *sudden death* in the employment of anæsthetics. At first, summary and insufficient interpretations only were furnished; then, these became more complete, and in better harmony with the facts. M. Duret, realizing how important this question is to the surgeon, has devoted great care to its study, and this constitutes one of the most remarkable divisions of his thesis.

In this part of his memoir is to be found, succinctly but clearly stated, an account of the voluminous researches published on this subject by French and foreign authors. (So many works have appeared in relation to Morton's and Jackson's surgical anæsthesia, that their collection alone would suffice to form an extensive library.) In 1862, Messrs. Perrin and Lallemand, in their treatise on anæsthesia made mention of —— cases of death from anæsthetic agents since Morton's discovery in 1847. In 1864, the report of the British Committee on Chloroform makes note of 109 cases. In 1865, Sabarth, in his treatise, publishes 119 observations. In 1867, Reeve, in the *American Journal*, mentions 133 deaths. The most recent memoir on this subject is that by Dr. Kappeler, in the *Deutsch Klinik*. He has made a collection of the cases of death from chloroform published by the German and foreign Journals since the appearance of Sabarth's treatise in 1865 to 1876, giving a series of 101 observations. M. Duret pursuing the investigation up to the present year (1880), mentions 132 fatal results.

Since the date of the discovery down to the present time, the number of deaths from chloroform, which have been published, may be set down as being at least 300. It is however necessary to multiply this last figure by four or by five, in order to approximate the truth with reference to fatal accidents due to chloroform In presence of such an imposing array of mortality, it becomes a duty to investigate the circumstances which have played a part in causing such disastrous results, and this investigation is facilitated by the tables which M. Duret has prepared.

A glance at these tables quickly enlightens the student, who is readily enabled to understand the causes of death from chloroform. [These differ in the *healthy* and in the *sick* individual. The first may die under chloroform, as the animal dies, whilst being experimented upon; in the latter, the phenomena are usually more complex.] Death by chloroform, *during narcosis*, may supervene at different periods. The patient, at the moment when the anæsthetic is first brought into proximity with the air passages, makes a few inspirations and succumbs: this is death by *reflex initial chloroformic shock*. The researches of Franck and Arloing have shown that the stimulation of the larynx, by irritating vapors (chloroform or ammonia) suffices to cause cessation of the heart's action. In clinical experience, such cases of death are, relatively speaking, rare. The observation, if published, is most frequently worded with great laconism, reading, for instance, as follows: "The patient had hardly made a few inspirations, when he died suddenly."

A little later, when narcosis is still incomplete, during the phase of excitement or shortly after, when a notably quantity of the anæsthetic vapors has already found its way into the blood, death may occur through the irritating action which these vapors have upon the bulb (Arloing). This is death by *bulbar or secondary chloroformic shock*. It presents two varieties: the form by syncope, and that by apnœa; that is to say, that at times the heart ceases to beat first, whilst at others, the respiratory troubles precede the fatal termination.

Lastly, when narcosis is complete, when the anatomical elements have become impregnated with the anæsthetic vapors, which have been already for some time in circulation in the blood; when their primary effect has come to an end, death no longer occurs from shock; the effects which are now to be apprehended are those resulting from *intoxication*. In true intoxication, the vitality of the respiratory centre in the *centrum vitale* is annihilated first. Death from the heart is only observed, where some pathological alteration of this important organ exists. The clinical facts presented by M. Duret establish very clearly these various forms under which death may supervene.

Chloroform is not always the principal factor in causing death. The disastrous action of *traumatic shock* under chloro-

form cannot be denied, as the experiments conducted by M. Vigouroux, and the clinical observations of Bickersteth and M. Duret show.

It may also come to pass, that patients who have taken chloroform and have completely recovered from its effects, die however a few hours after such recovery; they fall victims to syncope, or to acute pulmonary congestion.

The physiological effects of chloroform, which are generally well tolerated by the organism, are so deeply modified by certain pulmonary or cardiac lesions (which are either provoked by the administration of the anæsthetic, or, existing beforehand, are rapidly aggravated by its use), that the danger incurred by patients is often notably increased to such a degree, that it is well to ask oneself whether abstention is not preferable. Autopsies of subjects who have died suddenly under chloroform prove, that in a great number of cases (about 65 per cent.) one or more of the organs composing Bichat's vital Tripod is discovered to be in a decidedly pathological condition. When such leisons can be detected before giving the anæsthetic, must they be taken in the light of contra-indications? Doubtless the danger will be greater, but the question arises whether the *balance of risks* should make the surgeon lean towards abstention?

M. Duret, aided by all the data which the present condition of science can possibly supply, undertakes the discussion of this problem in the division of his Thesis, which is entitled: the contra-indications to anæsthesia derived from the constitutional state of the patient, and from the nature of the operation.

The author establishes, by the discussion of facts, by the results of post-mortem examinations, and by carefully weighed critical study, that the cases which require the preference to be given to abstention, are the following: delirium tremens and acute alcoholism, drunkenness, on account of the danger of bringing on a fatal attack; well marked hypothermia, because anæsthetic agents lower the temperature; algidity and traumatic stupor; acute anæmia caused by profuse traumatic hæmorrhage; well characterized adynamia; intense and diffuse congestive affections of the brain and lungs, where asphyxia and cyanosis are threatening (this condition frequently occurs in the alcoholic forms of cerebral congestion, and in strangulated hernia, when the strangulation is several days old); in fatty degeneration of the heart accompanied by swooning, lipothymia and painful, short breathing, with attacks of apnœa, when the heart's sounds are weakened, the pulse small, irregular and intermittent. It must be admitted, however, that, under such circumstances, grave reasons exists for postponing an operation, or for not undertaking it at all.

There are also circumstances, says the author, in which there is no absolute contra-indication (because it lies in the power of the surgeon, by administering the anæsthetic prudently, to

avoid shock and depression of the nervous centres, thereby avoiding accidents) but in which however the risks incurred by the patient are greater than usual. [It would therefore be useful to prepare *a scale of risks* to be consulted in connection with narcosis; but at the present time the elements necessary for the formation of such a scale are not obtainable with sufficient precision.]

Nevertheless, are to be considered as being *more exposed:* those patients who are laboring under long standing affections of the organs of the vital tripod, such as degenerations of the heart, extensive pleural adhesions; certain temperaments or nervous states, conditions of depression; taciturn, melancholy dispositions; persons who are in dread of death, of an operation, or of chloroform.

Lastly, M. Duret calls attention to certain operations which appear to predispose to accidents from chloroform: operations upon the face and air passages, reduction of luxations, rupture of anchylosis, straightening of limbs, operations for strangulated hernia, where there exist concomitant symptoms of pulmonary congestion; operations for fistula and fissure in ano. (Guyon, Nicaise, etc.)

In the third part of his memoir, M. Duret compares the physiological action and the clinical employment of the various anæsthetics: chloroform, ether, methyl chloride, ethyl bromide, protoxyd of nitrogen (in connection with the last of which, he mentions M. Bert's recent discovery) and finally the different methods of mixed anæsthesia. (Claude Bernard, Trélat, Périer.)

The fourth division presents a short summary of the indications and contra-indications for local anæsthesia.

Although it must be said that the plan mapped out by the author was vast, yet his descriptions are succinct and easy, rendering agreeable the perusal of this very timely publication.

THE VERTEX COCCYGENS, GLABELLA COCCYGEA AND FOVEOLA COCCYGEA AS PROBABLE REMAINS OF EMBRYONAL FORMS IN THE VICINITY OF THE COCCYX OF THE HUMAN FŒTUS, NEWLY-BORN CHILD AND ADULT.

Some time ago, *Prof. Alex. Ecker*, of the University of *Frieburg*, in *Baden, (Germany)*, honored me with a copy of one of his recent papers, originally published in the "Archive fuer Anthropologie," and bearing the above title,—soliciting at the same time my assistance in procuring a number of negro-embryos and foetuses upon which he desired to extend his investigation on this subject. Although this subject in itself may, perhaps, be of but little practical value to the practicing physician, it is, nevertheless, of sufficient anatomical interest,—especially to the obstetrician who has ample opportunity of observing the parts described,—as to render it worthy of no-

tice. I shall, therefore, take opportunity of offering some brief extracts from this paper, concerning those parts mentioned in its heading, but leaving aside the description of numerous embryos, foetuses, etc., which the author examined in the course of his studies, as also some other points treated in the paper. Though the subject, as it appears, is not altogether new, yet, the attention it had received previously to these investigations by only a small number of investigators, was but superficial in comparison with the more thorough labors of Prof. Ecker.

Commencing with the *vertex coccygeus* the author remarks: That the converging whirl of hairs in the coccygeal region, bearing this name, represents the inferior termination of the median dorsal current of hairs, in which the lateral dorsal currents enter, above in shorter, lower down in wider curves. The currents of hair from the hips, coming from the lumbar region and passing around the trochanters in a posterior direction to the gluetal regions, also enter the vertex coccygens, especially the upper and lateral portion, while their lower portion turns off towards the anus. A median line of conveyance of the hairs runs from the coccygeal vertex to the anus, in which the currents from the hips meet each other; this line the author designates "crista ano-coccygea." In this line, namely, it is frequently found, especially in older foetuses where the fine hairs of the *lanugo* are longer, that the latter are turned up like a "comb of bristles," or a mane, while those forming the vertex coccygeus are turned somewhat spirally, as on the hairy points of the tail of mammals. On those foetuses, covered thickly with vernex caseosa, a real, whitish little tail is frequently observed to exist in place of the coccygeal hair-whirl, and which appears in the form of a little hair-brush after the washing with ether. In the middle of the crista ano-coccygea a so-called cross is met with, i. e., a point of divergence of currents meeting each other; on this cross, the upper portions of the hip currents are turned upward toward the vertex coccygens, while the lower ones pass downward toward the anus.

As regards the topography of the coccygeal hair-whirl, the author further remarks, that the latter is by no means always found upon a point corresponding exactly with the apex of the coccyx, but frequently a little higher. This will appear natural in considering that the arrangement of the *lanugo* shows in general manifold variations, and that the curve of the coccyx differs during the different stages of development. The location of the vertex coccygens, corresponding with the points of the coccyx,—which in the earlier stages maintains a more vertical position,—will be changed with the increasing curve of the latter.

The name *glabella coccygea* Prof. Ecker has applied to designate a formation, which, to the extent of his knowledge, had as yet not been observed. It represents a bald spot of different

extent, situated above the hair-whirl, and mostly in the vicinity of the last sacral or first coccygeal vertebra, being about the place of the lower (cutaneous) termination of the sacral canal; it is especially conspicuous at the time when the hairy covering of the foetus has appeared. Somewhat later, after birth, closer attention will be required to recognize the spot. The respective place upon the skin differs in extent, sometimes it is small, or also totally wanting; the spot, however, is always distinguished not only by its baldness, but also by its skin being much thinner than that of the surrounding parts, and also more vascular, so that the foetus from four to seven months old, numerous loops of capillaries may be seen shining through it. Not unfrequently a portion of this place, generally the lowermost, is observed depressed in the form of a dimple, or even the whole glabella, especially when small in extent. If the latter is the case, it then represents the coccygeal dimple—foveola coccygea,– to be considered directly. As the latter appears always bald, it becomes probable that it originates upon the area of the glabella.

The coccygeal dimple—*foveola coccygea*—of the newly born child is, as the author says, very frequently met with, but appears in different degrees of development, for which reason it is often over-looked. It is not always that it appears in a, so to say, typical form, i. e., as a roundish dimple with an elevated border, but is frequently represented by a slight, oblong, smooth and bald depression of a clearer (cicatrix-like) appearance than the surrounding skin. Sometimes this spot deepens downwardly into a real dimple, representing both formations. It is justified to consider the flat cicatrix-like spot as the rest of the glabella, upon the area of which the foveola originates. But always the dimple appears bald, and this is the distinguishing character of the glabella as well as of the foveola, while the edges of these spots are frequently abundantly covered with lanugo. A real hair-whirl, however, is rarely seen upon the newly-born child as distinctly as in the last months of foetal life. From the posterior part of the dimple a somewhat elevated raphé descends in the median line towards the anus. The distance between the foveola and anus amounts on the newly-born child to about 15 mm. to 2 cm., while the extent in length of the whole spot named, from above, downward, amounts only to from 8 to 20 mm.

Of the three formations above described, the foveola coccygea is the latest to appear, but, at the same time, the only one persisting. Judging from the comparatively late appearance of this formation, it may be presumed that its origin stands in relation with some relatively later processes of formation. In this respect two anatomical facts appear to be worthy of consideration, they are: the intimate connection of the terminal point of the coccyx with the skin through the ligamentum caudate, and the straight, backwardly directed position of the

coccyx in the foetus. These circumstances render it probable that in single cases, at a later period, and with the increasing curve of the coccyx, that portion of skin attached to the apex of this bone will be drawn inward. Whether the presence of a foveola coccygea ever coincides with an increased curve of the coccyx forward, the author has as yet not had an opportunity to observe.

In concluding the above brief extract from Prof. Ecker's paper, I take opportunity to appeal to those of my medical friends and colleagues, into whose hands negro-embryos and foetuses may chance to fall, to assist me in collecting the material necessary to the further pursuance of the investigations of our German colleague, who for many years has ranked among the most distinguished anatomists and anthropologists, and who will most cheerfully return his thanks for the favor received. As soon as obtained, the specimen should be put in a solution of bichromate of potassa—about 10 grains to the ounce of water—or, if this is not at hand, in a mixture of equal parts of alcohol and water, and forwarded to me by express or otherwise.

But it is not only by procuring the material that we may assist Prof. Ecker in his investigations; statistical observations on newly-born children and infants, relating to the presence or absence of those parts described in his paper, also may be made and reported to him, either directly or through me.

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WARRNING TO TRAVELLERS.

A communication which we have received from a traveller describes a severe outbreak of typhoid fever in Switzerland, to be traced, it is stated, as most of such outbreaks are traced, to impure drinking water. This frequent cause of disease to travellers, will, in the end, scare away travellers to a considerable extent from Continental travels, unless the local authorit ties of the principal towns of summer-resort on the Continen- manifest a more earnest determination to purity the air, soil, and water, and especially to provide a perfectly pure and undeniable source of drinking water, which is rarely to be found at present in any Continental town or village. Sir Henry Thompson, adverting to this abundant source of danger to travellers, recently recommended that every traveller should carry with him a filter and a teapot, by way of practically abolishing by personal care some of the danger of impure water by securing that it should be very thoroughly boiled before being used. Dr. Hermann Weber, whose experience of foreign resorts is perhaps greater than that of any other English authority, has published a similar warning to travellers, and has recom-

mended them to use Apollinaris water whenever it is to be obtained, as an undeniably pure drinking water, which would secure them from these dangers; and he has stated that he has known, in more than one instance, when members of the same travelling party having been careful to adopt this precaution, while others have neglected it, that those who adopted such precautions have been saved from typhoid fever, which attacked other members of the party. In the meanwhile, some such precaution for obtaining drinking water of absolute and guaranteed purity must recommend itself as a necessary means of safety. Recent analyses by chemical authorities, of which some of the results are before us, have shown that the water contained in the syphons which are introduced at foreign *restaurants* is not more reliable than the ordinary water supply; indeed, a table before us, to which, perhaps, we shall subsequently have to refer, indicates that, in one great foreign city at least, the water in the syphons is very much more impure than even the ordinary city drinking water, being in some cases little better than diluted sewage water. It appears that the manufacturers of these aërated waters in foreign syphons are by no means very careful from what kind of surface-wells they draw their supply, or how they purify their water; and on the whole, the danger of drinking the aërated water of syphons is, unless the quality be definitely ascertained, greater even than that of drinking the ordinary impure water. It is quite time that foreign authorities should turn more serious attention to this subject. The evidence of the carriage of typhoid poison by contaminated water, overwhelming as the demonstration has been in this country, is by no means sufficiently appreciated abroad; indeed, the subject has been so imperfectly treated, that some foreign authorities profess absolute ignorance of facts which may now be taken as among the best established of modern times. It is well, until they have become more enlightened, that travellers should regard drinking water with precaution, and should be satisfied in some way or other that the table water they drink is of absolute purity; and such assurance is best obtained by confining themselves when traveling to the use of a natural mineral water, suitable for table purposes and of undoubted pure origin.—*British Medical Journal.*

THE CLAIMS OF COMPARATIVE MEDICINE.

To young men, ambitious of earning their living in scientific pursuits, the facts given elsewhere concerning the condition of comparative medicine should be read with attention. We are told by Prof. Bates that here is one branch of science which offers a rich field for study, and, furthermore, that it is sure to bring substantial pecuniary rewards in a short time. There is, he says, a deplorable lack both of knowledge and skill in most

of those who now practise among animals, and the opportunities for helping the removal of such deficiences are very great. There are now not enough educated veterinary surgeons to furnish the cities of this country with one apiece. There is a constant demand upon the veterinary colleges of this city for skilful practitioners, and those who have been sent out thus far have at once stepped into very lucrative practices.

Veterinary science is one which has been growing rapidly within the past few years. There are two colleges, both in this city, which have done excellent work in educating young men in comparative medicine. They have already secured for themselves a good reputation, and appear to have ample facilities for maintaining it. There are also three veterinary journals, all published in this city, which give evidence that there is much scientific ability as well as professional enthusiasm among those following veterinary practice. It seems to be the aim, and it is a laudable one, of the teachers of this branch of medicine, to make the education of their pupils broad and comprehensive. It is desired to have the graduate not alone a horse-doctor or a cow-doctor, but a man qualified to give medical advice upon the diseases of all domestic animals; to make him, in fact, a doctor of comparative medicine. Such an ambition is to be commended, not only because it will enlarge the scientific knowledge, and elevate the status of the veterinary practitioner, but because it answers a practical need. Of the two billions of dollars which the domestic animals of this country represent, only three-fourths are in horses. The amount of money annually lost by a single disease affecting hogs, is estimated at $20,000,000 Pleuro-pneumonia also causes great losses among cattle, and it is asserted that if the disease should get among the herds of the west, the price of beef in the east would go up to five or even twenty times its present amount.

Obviously it is worth while, therefore, both to the State and to large stock-owners, that there should be men acquainted with these diseases and competent to advise regarding them.

It is not without reason that there has been little reputation in the past associates with the title of "horse doctor." If, however, those who assume this title hereafter show themselves educated, intelligent, and useful practitioners, the reproach will soon disappear. We commend the subject to the attention of the large numbers of young men who are proposing to enter an overcrowded profession where success is slow and final compensation not always great.

The results to the human race from a better knowledge of the diseases, such as tuberculosis, which affect domestic animals, are matters on which we need not dwell. It would be in the interests, however, of the more purely scientific branches of medicine, physiology, and pathology, for example, that there should be a more active study of comparative medicine.—*Medical Record*, October 9, 1880.

A NEW SENSE—ORIENTATION.

The difficulty of losing a miserable cur or a mangy cat is proverbial, and doubtless most of our readers have at some time in their lives made futile attempts to get rid of such animals through this process. They have, however, invariably returned to their whilom kennel or accustomed hearth, and the promptness of the turning up has been in direct ratio to their worthlessness. A good dog, lost accidentally, seldom manifests this peculiar power—the sense of orientation.

Some gentlemen in Cincinnati have recently been testing a dog's power of "orienting." They anæsthetized the canine, and putting him in a basket sent him on a circuitous journey by rail to a point 150 miles south of the starting point. He was here kept shut up over night and in the morning let loose. Without any preliminary survey he slunk into a ravine, and then with nose well up and tail erect he struck a bee line for Cincinnati, due north. The experimenters forwarded a report of their doings to the owner by rail, and on the afternoon of the next day after receiving this report he met his dog on the street, "wet, full of burrs and remorse, and apparently ashamed of his tardiness."

The manner of the dog's travel forbids the possibility of his having reached home through the sense of smell or sight, or through any of the other five senses, and the directness of his return shows that it was not by mere chance. Birds of the migratory species, and even domesticated pigeons have this power of returning to their former haunts in a remarkable degree, and so have migratory fish and reptiles. They may vary a little sometimes in their course, but as surely as the needle seeks its pole do they at length reach their haven. It is proposed to call the sense through which they accomplish this "orientation," although the fact that the animal does not necessarily strike the east would seem to make the term somewhat inappropriate.—*Mich. Med. News.*

THE VIABILITY OF RACES.

The vitality, or rather, viability of races of men appears to to differ as much as it does in individuals. The influence which this has exerted on the history of the world has not yet been estimated; what it may exert in the future cannot be guessed. It is one of the great factors in universal history, as it is one of the great problems to the sanitarian.

The potency of life does not bear a direct ratio to the intellectual activity of a race, or even to its physical energy in its individual aspect. Certain races not highly gifted in these respects persist and increase under unfavorable circumstances, while others, quite distinguished at one period, disappear at a later one.

Among the races of least viability appears to be the Papuan stem, whose branches inhabit the islands of the Australasian Archipelago, and the mixed Malayan race who people the islands of the South Sea. The natives of Tasmania, once well populated, have died out to the last man; those of Australia are disappearing with equal rapidity; the sturdy and warlike New Zealanders fare no better; while in the Sandwich Islands and other Pacific groups the native population dwindles year by year, although Christianized and civilized.

Whether the aboriginal race of the United States has actually diminished in number has lately been called in question. A well known student of Indian life has marshaled a number of plausible arguments to show that the natives were greatly over-estimated by the early explorers, and that they have not decreased, at least since a careful enumeration of them from time to time has begun. Certain it is, however, that whole tribes of them have perished; scores of languages of which the early writers collected fragments, are not now spoken by a single living representative; extensive nations have vanished into nothingness. They too, we believe, were a race devoid of viability.

Many causes have been assigned by medical observers and philanthropists for these instances of national extinction. The introduction of new diseases, the consumption of alcohol, the use of weapons of a more deadly character, the discouragement which a strange and powerful civilization impressed on them, all these have doubtless been active agents. But the radical cause was their inferior vital energy. This is proved by the fact that other races have met unharmed all these deteriorating agencies. Take the African Negro. He has been subjected to them all, without any disastrous effect. Even under the severe conditions of slavery he has steadily increased, wherever the climate was warm. The limit to the progress of the colored race is, however, sharply defined. North of the 40th parallel, in the United States, its members regularly diminish. Their mortality is mainly attributable to pulmonary affections, to which they are far more prone than whites. Even in Alabama and Georgia, the deaths from diseases of the respiratory organs are over forty per cent. of the total, which is nearly double that of the whites from the same class of diseases.

The two races of the greatest viability—if we leave out of consideration the Chinese, whose introduction into distant lands has been too recent to furnish exact data—are the Latin and Anglo-Saxon branches of the great Aryan stem. The strong impress of ancestral conditions renders the Latin race active in warmer climes, but of little power to resist the cold of high latitudes; while in all their numerous colonies the Anglo-Saxon race has succeeded markedly only in the limits of the temperate zone.

There are few subjects more attractive to the physician of philosophical mind than the investigation of such problems as are here presented. As the preservation of life and the cultivation of vitality are his special aims, he here sees these presented in their broadest aspects. On what physical peculiarities, what hereditary powers, what mental habits this race viability depends, is an inquiry he can turn to with infinite zest, and the promise of large profit. Were it solved, we could read history with different eyes, and have the future of the world mapped out before us.

The attempts of the thoughtful Draper and the ingenious Buckle to bring history under the control of physical laws, were meritorious, but incomplete. Both looked too much at the mere environment, too little at man himself; he can never be understood, his story can never be rightly written, until his duplicate nature is allowed and accounted for.—*Med. and Surg. Reporter*, June 19.

NOTE ON QUININE FOR HYPODERMIC USE.

By JAMES T. WHITTAKER, M. D.

During the past six months I have made numerous experiments with the subcutaneous injections of quinine in cases of pronounced or masked malaria, where the condition of the digestive system prevented its absorption when administered per os. It is useless to state that the efficicacy of the remedy depends altogether upon the amount absorbed by the tissues, and not upon the amount introduced into the stomach. It is now well established that quinine will act when injected into the rectum with the same value as when taken per os, and this is a favorite method of its use in children; but a rectal injection, or repeated rectal injections, are not permitted by adults, and if permitted, are at least no longer retained. In all cases a few drops of tincture of opium should be administered with them.

The hypodermic method does not offend the most fastidious taste, literally or æsthetically, and few patients object to it, after the first trial.

The only objection to it worthy of consideration is that which has most prevented its, use, viz.: the comparative insolubility of all the preparations, and hence the impossibility of securing the administration of a sufficient quantity. Hence the hypodermic use of quinine is still very limited.

Pure quinine is altagether too insoluble for this method, and the sulphate, its commonest salt, requires alcohol or acids to make a solution permanent. But alcohol and all acids irritate the tissues and thus violate a cardinal prerequisite of full absorption. If a sufficient quantity of water be used to make a clear solution, the operation becomes really an acu-puncture, which is a sharp counter-irritant and nothing more.

The bisulphate of quinia dissolved in glycerine will keep for a long time. Eulenberg says for four months. It dissolves, under heat, in three parts of glycerine, and thus permits the introduction of 10-15 grains with each syringe full of the solution, a quantity quite sufficient for all anti-periodic effects.

The muriate of quinia is richer in quinia than the sulphate, the proportion being, according to Eulenberg, 83.6 to 74.3. However, it is "more soluble, more quickly absorbed, and less liable to decomposition." But it is more expensive, an item which must also be taken into account.

The ferro-citrate, bitartrate, lactate, etc., salts have all been employed in the same way, but none of these preparations contain the same amount of quinia as those in more common use.

The hydrobromide, or the neutral bromide, is the salt best adapted for hypodermic use. Latuir and Boille, Gubler and Soulez have all experimented with it quite extensively, and most favorable reports of it come to us from all parts of our own country. It is not quite so soluble as the bisulphate, but is richer in its alkaloids. It dissolves, under heat, in 15 parts of water, or in 4 parts of glycerine. Soulez recommends the use of alcohol, and Rosenthal glycerine in its preparation, and perfect solutions may be readily made in either way, so that an ordinary syringe full will introduce 15 grains of the salt. But there are objections to both methods of preparation.

Alcohol irritates the tissues and glycerine makes a thick solution, almost too thick for ready passage through a very fine needle, and probably too thick for ready absorption.

I have, in practice, entirely discarded all vehicles except water, and rely solely upon heat to obtain a perfect solution. I have the druggist put into a test tube twenty grains of the bromide of quinine and add to it two drachms of water. The tube should be corked, not to preserve the substance, for it is still crystalline in this proportion, but for cleanliness. To use the drug, all that is necessary is to heat the tube over a gas flame, coal oil-lamp, or other means of illumination. The tube should be held above the light, of course, and not in it, that it be not smoked, and hence rendered opaque. Two or three minutes suffice to reduce the quinine to a limpid, crystalline fluid in the tube. Thence it is poured, then, in sufficient quantity into a teaspoon, previously warmed by holding one minute over the flame, and thence from the spoon it is taken up into syringe, warmed also in the same way, and is ready for use, which must be immediate. It may be injected anywhere, but always *under* and never *into* the skin. The ordinary syringe contains half a drachm, and this introduces about five grains at a time.

I have never known a patient to object to the reintroduction of the needle for the injection of ten or fifteen grains, if need be. The whole operation, no previous preparation being neces-

sary, occupies about five minutes time, not a tithe of that often consumed in irrelevant conversation.—*Cincinnati Lancet and Clinic.* Oct. 9.

THE APOSTATE'S CREED.

The following very clever hit at the scientific unbelief of the day, written by Mr. A. Bierbower, of this city, appears in the last issue of the New York Independent:

"I believe in a chaotic nebula, self-existent, evolver of heaven and earth, and in the differentiation of the original homogeneous mass, its first begotten product, which was self-formed into separate worlds, divided into land and water, self-organized into plants and animals, reproduced into like species, further developed into higher orders, and ultimately refined, rationalized and perfected in man. He descended from the monkey, ascended to the philosopher, and sitteth down in the rights and customs of civilization under the laws of a developing sociology. From thence he shall come again, by the disintegration of the heterogenized cosmos back to the original homogeneousness of chaos.

"I believe in the wholly impersonal absolute, the wholly uncatholic church, the disunion of the saints, the survival of the fittest, the persistence of force, the dispersion of the body, and in death everlasting."—*Cin. Lancet and Clinic*, Oct. 9.

NEW STUDIES INTO THE NATURE OF DIPHTHERIA.

Under the direction of the National Board of Health certain experiments have been recently performed by Drs. H. C. Wood and H. F. Formad with the object of discovering the nature of the diphteritic poison. These experiments were made for the most part upon rabbits, and were intended primarily to discover whether diptheria could be induced in those or other lower animals. This particular point was quite well settled in the negative some time ago by Curtis and Satterthwaite, whose investigations were far more extended than those which are now presented. Drs. Wood and Formad have, however, given some valuable corroborative evidence, and have added other facts which are very suggestive and which really bring us somewhat nearer a true knowledge of the pathology of diphtheria.

The first series of experiments was made by inoculating bits of fresh diphtheritic membrane in the mouth and thigh of thirty-two animals; eighteen being rabbits, the remainder cats, dogs, and a goat. Six of these animals, all being rabbits, died within about two weeks or less from the time of inoculation. Post-mortem examination discovered evidences of tuberculosis in every instance. In only one case was there any tracheal false membrane, and in this the deposit may have been due simply to a catarrhal inflammation. Micrococci were found in the

blood. In no case did inoculation by the mouth cause any local or general symptoms, a fact which corresponds with the observation of Curtis and Satterthwaite, that inoculations in the cornea were entirely ineffective. The inoculations in the thigh seemed to result in the development of small' cheesy lumps. These either became absorbed, or they infected the system and caused death by tuberculosis. The rabbits, then, it is concluded, may either die very soon after inoculation of diphtheritic membrane, by absorption of a non-specific septic poison, or they may die a week or two later from a tuberculosis due to absorption of cheesy products. Most of the animals experimented on by Curtis and Satterthwaite died from the former cause, perhaps because they used larger pieces of membrane and inoculated more deeply.

It was shown by subsequent experiments that the tuberculosis was not due to anything specific in the membrane, for that disease followed the inoculation of bits of wood, glass and wire.

So far, not much more has been discovered than was already known.

The next series of experiments was made to determine the accuracy of Trendelenberg's assertion that the introduction of pseudo-membrane into the trachea produces diphtheria. Dried diphtheritic membrane was introduced into the trachea of four rabbits. One of these died in five days. The post mortem showed a delicate pseudo-membrane in the trachea. It was 1 mm. thick in some parts, was infested with micrococci, and showed the usual structure of natural and traumatic pseudo-membrane. The internal organs were tuberculous, but there were no bacteria in the blood. The experiments, as far as they went, confirm the statements of Trendelenberg, but they indicate very little.

A study was then made of the effects of ammonia in producing pseudo-membranous trachitis. This substance was injected into the trachea of four rabbits, a cat, and a dog. All the animals except the dog died, death generally coming on in two or three days. False membrane was observed in the trachea of all six animals, and tubercles were also uniformly present in the internal organs. Furthermore, contrary to the statements of Oertel, bacteria and micrococci were in every instance found in the traumatic false membranes. The experiments seemed to show that diphtheritic membrane placed in the trachea will produce a fatal pseudo-membranous trachitis, although the same membrane inoculated in the thigh will not cause death, except indirectly, by exciting caseous foci and a resulting tuberculosis. This point as stated by the experimenters, needs a further study.

A fifth set of experiments showed that other foreign bodies, such as slough, inflammatory products, and pus, will also produce a pseudo-membranous trachitis. So that the conclusion

is almost certain that such trachitis is not a specific process, but is only an intense inflammation such as any highly irritant body may excite.

As a general conclusion, then, it is stated that the contagious material of diphtheria is really of the nature of a septic poison which is also locally very irritant to the mucous membranes; so that when brought in contact with the fauces and nose it produces an intense croupous inflammation simply by its local action, and without any absorption. But further, though it may sometimes thus act locally and directly, it may also bring on the angina by being first absorbed, then acting locally by being carried in the blood to the mucous membrane of the throat. Under this theory, again, it is possible that the poison may cause a purely local angina, no absorption occurring; or, on the other hand, a simple local non-specific trachitis may end in adynamic diphtheria in consequence of absorption of septic material.

In regard to the relation of bacteria to the disease, it is stated that it seems altogether improbable that they have any connection with it whatever. There is, however, the possibility that the bacteria may act upon the exudations of the trachea, as the yeast plant acts upon sugar, and cause the production of a septic poison which differs from that of ordinary putrefaction, and bears such relations to the system as, when absorbed, to cause the systemic symptoms of diphtheria.

These views in regard to the nature of the diphtheria poison have a good deal of the hypothetical about them, and are, indeed, only put forth tentively by their authors. The experiments of Dr. Wood and Dr. Formad are very instructive, but perhaps in no direction more than showing where further investigation is needed. It is to be hoped that the National Board of Health, whose bulletins have heretofore been somewhat meagre in scientific matter, will see that the present work is continued.—*Medical Record*, October 30, 1880.

NERVE-STRETCHING FOR THE CURE OF LUMBAGO AND SCIATICA WITHOUT ANY CUTTING OPERATION.

Dr. James M'Craith, of Smyrna, writes to the *British Medical Journal* upon the above topic: "I have had," he says, "very lately an attack of lumbago, for the first time in my life. A patient of mine, whom I could not go to see, came to my house and volunteered to cure me, assuring me he had cured, almost instantaneously, several people suffering in the same manner as I then was, by kneading and pressing very hard the parts affected. He placed me on my face and hands on the sofa, and kneaded the painful parts very forcibly for some time, and then he said: 'I don't hear the cric-cric which I always hear when I succeed at once, so I fear I shall not succeed with you.' This is evidently the sensation of 'adhesions giving away,' as

described by Dr. Bramwell, when the cure is satisfactory. I have known of cases of torticolis getting suddenly well, also of pain in the shoulder, on some violent movement being made. These are evidently cases of 'nerve-stretching,' and I think we have got at the true scientific explanation of the success of the popular proceeding in those cases; and with the distinct object of 'stretching the nerve' and 'breaking up the existing adhesions,' we may adopt with advantage, and much greater chance of success, this popnlar method. In severe cases chloroform may have to be used, as the kneading is painful."—*Medical Record*, October 30, 1880.

WINDOW-SCREENS AS A PROPHYLACTIC OF MALARIAL POISONING.

Dr. W. C. Maull, of Middletown, Ill., writes to the Michigan Medical News. The subject is of prime importance, and should be investigated:

Two years ago, when malarial affections were very rife here in a very small circumscribed locality, my attention was attracted to the almost entire exemption of two families from such affections, who lived in the infected locality, surrounded by houses in which for an occupant to be well was the exception. A hired hand of one of these families becoming ill with remittent fever, the opportunity presented upon visiting him of trying to ascertain why they had been granted such immunity. I found that not only were they in the midst of the stricken district, but also that they were no more cleanly and no more careful in their habits and surroundings than their neighbors, while they lived upon the northeast edge of a large pond or lake that an excessive drouth had completely dried up, and from which, at the time of my visit, the stench of decaying vegetable matter and fish was almost unbearable. The only appreciable difference between these two families and the others was that they had screens at their doors and windows and the others had not. My patient, the hired hand, had slept in a little house unprotected by screens, off from the main building.

Of course "one swallow can't make a summer," nor can a few instances like the above prove that screens are a protection from malaria, yet the marked cases of exemption above are sufficient apology for attracting the attention of the profession to the possibility of their being so. Admitting the theories of most writers about malaria, there are plausible grounds for the opinion that screens are beneficial in keeping out the poison. Saying that Salisbury is right, and he may yet be proved so, and that malarial affections are caused by minute cryptogamic plants of the family of palmellæ; might not screens prevent their substance or emanation from entering a room? Remembering that when awake and active persons may at their pleasure with complete immunity remain in malarial localities,

but that if they sleep in them they are almost certain to be affected, does not their possible beneficial effect appear more plausible?

Admitting again that the malaria is a resultant of heat, moisture, and vegetable decomposition, is it any more unreasonable to believe that screens may prevent its entering sleeping-rooms than that a row of trees will impede its progress, or that Sir Humphrey Davy's safety-lamp will enable a miner to go amid inflammable gases with impunity?

Daily observation increases my belief that persons who have their windows and doors guarded by screens are surely freer from the inroads of malaria than their neighbors who have not.

Should general observation prove them to be a partial protective, might they not be medicated? I communicate the above in the hope of attracting the attention of the profession to the possible benefit herein set forth.—*Louisville Medical News*, Oct. 2.

A NIGHT MEDICAL SERVICE.

At the instigation, and mainly through the praiseworthy efforts, of Dr. Henri Nachtel, it has been decided to organize a Night Medical Service in New York city, upon a plan which has worked satisfactorily in Paris, Berlin and St. Petersburg. The purpose of the night medical service is, without assuming any authority, to place prompt and efficient medical assistance at the disposal of the sick during those hours of the night in which it is often difficult to secure such attendance; and thus, in cases of accident, of acute disease, of poisoning (accidental or designed), and in the many difficult emergencies of the night-time, to save life by prompt and decisive measures taken at the proper juncture, and not delayed until medical interference is too late. The service is not gratuitous, and any applicant availing himself of its facilities in an emergency is expected, if able, to pay the doctor in the same manner as he pays his family physician when he employs one. It merely enables a householder, in case of sudden emergency, when the family physician is absent or out of town, to apply to the nearest police station; and having selected a physician from the authorized list kept at the office, to tide over the momentary difficulty, and leave him free to have recourse to the family physician in the morning. No obligation to employ the night attendant a second time is established or implied by the temporary emergency. The call is for once only; and, if the doctor pay any further visits, it must be in consequence of a private agreement between the night attendant and his patient, in which each acts upon his own responsibility, and at his own risk. If the night attendant finds his patient in such a condition as to render it advisable to telegraph for an ambulance, he is at liberty to act upon his own judgment promptly, if the patient or his or her friends consent, and to dispose of the case by remo-

val to a hospital; or, under less urgent circumstances, the night attendant may take such measures as are essential to the temporary relief of the patient, and advise removal to the hospital in the morning. The night attendant is, however, not endowed with any legal authority whatever; he merely speaks as an adviser, and not as an officer. If he entertain a suspicion of malignant contagious disease, it becomes his duty to report the case to the Board of Health without delay, in the same manner as any other practitioner; but of his own motion he has no power or authority to make any arbitrary disposition of the case. Happily, the compulsory reporting of all cases of contagious disease attended by medical practitioners is enforced with the utmost rigor in New York city, and it is to be hoped that a similar law will soon be adopted in this country.

The regulations for providing medical assistance in cases of sudden sickness or accidents during the night time are embodied in a short Act which has been recently passed. Under it, it becomes the duty of the captain of each police precinct in New York to register in a book provided for the purpose the names and addresses of all physicians and surgeons of good and regular standing residing within such district, who shall make application for such registry, and who shall thereby pledge themselves to respond to any call for medical attendance made by the police. It is the duty of the registrar of vital statistics to revise this list, and it is not lawful for the police captain to employ any gentleman so registered until he has received a certificate of endorsement from the registrar. The revised list is then printed, and posted in a convenient place in the captain's office, and copies of it are posted in the hotels and telegraph offices of each district. When application is made at the police office for medical assistance, the name and address of the applicant, and also of the person needing such attendance, and the date of the application, are at once registered. If an applicant have no preference, it is the duty of the officer in attendance to select the name of the doctor residing nearest to the residence of the patient. An officer is then detailed whose duty it is to call upon the doctor without delay, and to conduct him to the patient's residence forthwith. He then verifies the accuracy of the entries made in the book at the police office, and enters the name and address of the doctor attending, as well as those of the patient, and the date and hour of the visit, upon a blank form with which he is provided for the purpose, which he then signs and gives to the night medical attendant, who is entitled to receive three dollars from the public funds if the patient refuse to pay that sum in exchange for this certificate. In the latter case, the authorities reserve to themselves the right of recovering the three dollars from the patient in the law courts, unless he proves to their satisfaction that he is without sufficient means

to enable him to pay. The medical attendant has in all cases to transmit to the Registrar of the Board of Health, during the next twenty-four hours, "a full and accurate statistical exhibit of the case." Provision is also made for the prompt attendance of a second medical attendant if the first be not immediately available; and any physician who neglects to respond to the call of the police officer is liable to have his name struck off the register. An annual vote of three thousand dollars is made from the State funds to defray the cost of the night medical service.

The following objections have been made to the scheme. It is thought that the medical attendants will be mainly confined to young physicians just commencing practice, whose time is not fully filled up. This view is negatived, however, by the experience of continental cities. Many unqualified practitioners and quacks were thought likely to avail themselves of the service; but this will be impossible under the regulation which provides for the revision of the lists by the registrar of vital statistics, who has the power to erase the name of any practitioner for good and sufficient reasons, and who is thus enabled to investigate "the diploma, record or regularity" of any physician as to whose competence he may entertain a doubt. As we have before said, until the captain of police has received a certificate of competency from the registrar, he is not at liberty to employ any physician who has applied to have his name placed upon the register.

In our opinion, the scheme possesses the elements of success, and we shall watch its development with interest. If it succeed, there can be no doubt that it will confer great benefit upon a large class of the community, especially in case of epidemics; and we shall hope to see some similar scheme adopted in the metropolis and in other large towns throughout the United Kingdom.—*British Med. Journal*, Sept. 25.

ON THE CAUSE OF THE BAD ODOR SOMETIMES ASSOCIATED WITH EXCESSIVE SWEATING OF THE FEET, WITH DIRECTIONS FOR TREATMENT.

By GEORGE THIN, M. D.

There are few persons of experience, medical or lay, who have not had the misfortune to discover that certain individuals smell so offensively, that it is almost impossible to approach them. In many instances, the evil smell is connected with the feet, although there is reason to believe that this source is only suspected for the most part by those who have learned to recognize the odor, and who know that it is associated with perspiring feet. In some cases the smell is so strong and penetrating, that it pervades a room long after the person from whom it emanates (and who may have remained in it only a few minutes)

has left it. The entry of such an individual into the compartment of a railway carriage or an omnibus fills it immediately with a sickening effluvium, which, to the initiated, is unmistakable. These unhappy persons, if they belong to the wealthier classes, become exiled in a great extent from society; if they belong to the poorer classes, they may find it difficult to follow the calling by which they earn their living. Female domestic servants, from a cause to be presently explained, frequently suffer from this evil, and cannot in consequence find a household in which their presence is long tolerated.

It is difficult to describe a smell, and I will not attempt to describe this one, but it is of interest to remark that there is something in it suggestive of putrefying cheese Some friends of mine found a country farm house which they had taken for a short period, almost uninhabitable, on account of a peculiar disagreeable odor which pervaded every part of it. The odor was at first attributed to a supposed want of cleanliness in the dairy, or to the presence of new cheese which were being dried in one of the rooms of the house; but it was soon found that the smell proceeded from a young women who had been engaged to do temporary service.

I have several times met with extreme instances of this kind, and, until recently, have not been able to give the sufferers much permanent relief. Hebra's treatment, which consists in keeping the skin of the soles enveloped in diachlyon ointment, and necessitates the recumbent posture for eight to twelve days, I have not tried. Professor Hebra writes confidently of its success, but there are evident practical objections to its use in many cases.

The odor regarding which I am writing is so distinctive, that I have long thought it probable that it was associated with a special ferment; and a well marked instance of it having recently come under my notice, I have taken advantage of means placed at my disposal by the Scientific Grants Committee of the British Medical Association to investigate its nature. Before giving an account of the case, and what I have learned from it, a few preliminary remarks will be useful.

Profuse sweating of the palms and soles is not uncommon, but, in order to produce the specific odor to which I refer, something more than profuse sweating is required. The excessive perspiration, when confined by stockings and boots, macerates the epidermis, and, if the person stand or walk much, the skin of the heels becomes tender. This tenderness is accompanied by redness, slight blistering, or more decided localised eczema. In damp, relaxing weather, perspiration is increased; and we have thus two causes of aggravation, each potent, but both together very powerful—moist warm weather and prolonged pressure by walking or standing.

It has been pointed out by Hebra that the evil smell is not in the sweat itself, but in the coverings of the feet; a fact which it is easy to verify.

The patient who has accorded me the opportunity of investigating the cause of the smell is a young woman, aged 22, who has suffered from evil-smelling feet, with soreness of the heels, for several years. Her hands are usually moist, or even wet, but are always odorless. The smell from the feet is not constant, disappearing in dry bracing weather, and reappearing when the weather is moist and depressing.

The first experiment I made was to subject the soles of the stockings and boots to the action of an antiseptic solution. The success was complete, the odor being entirely banished. The antiseptic precautions having been soon neglected, the smell returned, and I took the opportunity of investigating its cause more minutely.

The sole of the stocking, a few hours after it was put on, was found to be quite wet; and a stocking, if worn for a whole day, was so extremely offensive that, when held close to the nostrils, its overpowering fœtor was comparable to that of putrid blood. The inside of the boot was equally wet and offensive; but, at the very time that the stocking and boot smelt so strongly, the heel itself, exuding moisture profusely, had no disagreeable odor. The sole of the heel was reddened and tender, and macerated around the edge, like a washerwoman's palm.

The reaction of the moisture in the stocking and in the sole of the boot was alkaline, that of the moisture exuding from the skin of the sole of the heel faintly alkaline, whilst that of the perspiration of other parts of the body was acid.

The fluid from the sole of the heel was thus shown to be not pure sweat, the faintly alkaline reaction being doubtless due to the serous discharge accompanying the eczema set up by the local hyperidrosis.

The fluid in the sole of the stocking was found to be teeming with bacteria forms, the nature and development of which I have carefully investigated. These investigations have produced reduced results of some scientific interest which I have communicated to the Royal Society.* The rapid development of bacteria in the fluid which exudes from the soles is doubtless favored by the alkaline reaction produced by the mixture of serous exudation with the sweat.

The treatment instituted in this case is as simple as it has been effective. The stockings are changed twice daily, and the stocking-feet are placed for some hours in a jar containing a saturated solution of boracic acid. They are then dried, and are fit to wear again if it be desired. The baracic acid effectually destroys the smell. But to kill the bacteria in the stocking is not enough. The leather in the bottom of the boot is wet and sodden, and smells as vilely as the stocking. This difficulty is got over by the use of cork soles. I directed my

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*On *Bacterium fœtidum*: an organism associated with profuse sweating from the soles of the feet. (*Proceedings of the Royal Society*, No. 205, 1880.)

patient to get half a dozen, which she finds sufficient. A pair must only be worn one day unchanged; at night they are placed in the boracic jar, and are put aside the next day to dry. If these directions be accurately carried out, the evil smell is perfectly destroyed.

The boracic acid solution is an excellent application to the painful skin in these cases. When the tender skin of the soles is washed with it, a sensation of coolness succeeds the feeling of heat and tension which are the usual accompaniments of the eczematous condition associated with smell, and the skin becomes harder and loses its abnormal redness.

The bacteric fluid would seem to act as a direct irritant to the skin. My patient assures me that, if she wears stockings which have been dried without being disinfected, irritation is speedily felt; and that the cork soles, if worn a second day without having been purified, act in a similar way.—*British Medical Journal*, September 30.

HYPODERMIC INJECTION OF ERGOTINE FOR CHRONIC ENLARGEMENT OF THE SPLEEN.

A Paper read before the District Medical Society of Northwest Missouri, October 13th, 1880.

By DR. A. GOSLIN, Oregon, Missouri.

Gentlemen: You know that in malarial regions, enlargement of the spleen—"Ague Cake"—"spleen in the side," as many of our patients express it, is of frequent occurrence. Years ago, in the Wabash bottoms, it was my fortune to see scores of my poor patients dragging out a miserable existence—pale, anæmic, spanæmic, hydræmic, or whatever else you may use to express a cadaverous appearance. Enlarged spleens were the prominent feature in all these cases. I was then young and enthusiastic, and I addressed myself especially to the cure of these poor unfortunates. I gave iron and the iodides in all their various combinations, internally; externally, I used all the various counter-irritants, and commonly, after a six to ten months persevering treatment, I was rewarded with a sensible reduction of the spleen, with an improvement in the general health and appearance; but I do not now recollect a single case where the spleen returned to its normal size in that time; and in many cases where the remedies were taken irregularly, and not persevered in most faithfully, no improvement followed; and many of my cases passed out of my hands from this spasmodic method of treatment. I feel sure it is the experience of most old physicians that this malarial hypertrophy of the spleen has been a source of annoyance and disappointment, and this, no doubt, has led surgeons to recommend splenotomy in order to get rid of the annoyance, as well as to give the most relief, in many cases, to their patients. Now, we should hail with joy any safe method of treatment which

promises to deliver us from this prolonged course of treatment —a course which so often ends in disappointment to our patients and mortification to ourselves. Last July I began the treatment of these cases by *hypodermic* injections of ergotine into the cellular tissue over the spleen, and the results have been so satisfactory, and I have been so elated over my success in quite a number of cases, that it has determined me to give a brief synopsis of them to this society, that others may be induced to try it; and should they be equally successful, it will prove a blessing to doctors, as well as to patients.

Case First.—Mrs. G., aged nineteen; married; seven months pregnant: I saw her on July 19th; found her propped up in bed, and had to be fanned all the time, as she suffered terribly from dyspnœa—a gravid uterus and an enlarged spleen; and when I say an *enlarged spleen*, it does not express it. The spleen extended from the left hypochondrium to the pubis, and across to the median line, the uterus occupying the right half of the abdomen. She was the most typical specimen of hydræmia that could be imagined,—not a particle of red color anywhere. Her eyelids hung like sacks of water, and she had general œdema. She had been abandoned as a hopeless case by an old physician who had treated her for three weeks. On July 21st, I gave her 20 minims of ergotine over the spleen, hypodermically; in half an hour her pulse was reduced from 140 to 115; the arterial tension was much increased, and breathing better. I gave iron, quinine and phosphorus regularly for the first two or three weeks, and a hypodermic injection of ergotine about twice a week, until thirteen injections were given, with a rapid improvement in all her symptoms. The spleen was reduced rapidly, and very perceptibly after each injection; at the thirteenth, it could scarcely be found at the margin of the ribs. Her waxy color gave way to a ruddy hue; her breathing became natural, and September 8th, at last visit, instead of being confined to her bed, was found chasing the pigs out of the cornfield. This was a case of malarial hypertrophy of the spleen of fifteen years standing. I can find no case on record where hypodermic injections of ergotine have been administered to a pregnant woman, and we might theoretically object to it, for fear of arousing the uterus to action; but I can state that no such symptoms were developed in this case.

Case Second.—Mrs. S., aged thirty-seven, was confined on the 3d of last December. She had malarial hypertrophy of the spleen of three years standing; was very pale and waxy in appearance,—in fact, seemed bloodless. I gave her the various tonics internally, and painted with tinct. of iodine over the spleen. Had to wean the child at six weeks to save her life, as she was in great danger of dying from exhaustion. I continued tonics and nutritious diet, and gave tinct. ferro chloridi and fld. ext. ergot for a month, in the hope of reducing the spleen.

Her general health improved some after weaning the child, but the spleen was not reduced a particle. On August 2d, gave her, hypodermically, 20 minims ergotine over spleen; repeated this on August 7th, 10th, 22d, 30th, and September 5th and 10th,—making, in all, seven injections. At the last application I could not find the spleen, and she now presents the rosy hue of a girl of sixteen, and says she has not enjoyed such health in ten years.

Case Third.—Samuel C., aged twenty-nine, has had enlarged spleen for the past seven years, and has been under treatment of regular and irregular physicians; has made two trips to Colorado, in the hope of gaining his health. The first time I saw him was on September 6th. He had just returned from Colorado the day before, and had mountain fever; was exceedingly pale and haggard in appearance; pulse 140; general œdema, and no red color to be found in any tissue,—in a word, he was excessively hydræmic. His spleen extended below the crest of the illium, and to the median line. I gave him the hypodermic injection of 25 minims ergotine on September 7th; his pulse was then 140 and temperature about 102; in ten minutes, pulse 120; in half an hour, pulse 110, and in a moist perspiration. I gave him another injection of 20 minims on September 11th, 15th, 18th, 24th, and October 1st. This case had a sad ending on the 24th of September. After leaving my office and riding home, six miles, in a wagon, he was taken with fever and a bilious diarrhœa. I did not hear from him for one week. October 1st, saw him and treated him with tonics, stimulant and generous diet, but he sank and died on the 12th instant. His spleen was almost natural in size, his œdema all gone; but his excessive hydræmic condition could not be overcome. Did the ergot have anything to do in bringing on his bilious diarrhœa?

Case Fourth.—Mrs. N., aged twenty-eight, married, has had moderate enlargement of the spleen for ten months; is able to do her work, but says she has been failing in health ever since her side has been sore; complains of pain in left side whenever she works; is rather pale and has been losing flesh for some time. I gave her hypodermically 20 minims of fluid ergot over spleen, on September 25th, October 1st, 5th and 9th,—four in all. At the last injection, spleen could not be felt at margin of ribs; her general appearance began to improve at once; appetite good and she says she is stronger and is in better health than for many months, and is gaining flesh.

Two questions may be asked which I deem worthy of discussion: 1st. Why should not ergot, given by the mouth, produce the same results as when given subcutaneously? 2d. Would ergot injected into any other part of the body have the same good effects upon the spleen?

In answer to the first question, I would call your attention to my second case, where I gave iron and ergot by the mouth for a month without the least reduction of the spleen; but when the

ergot was given subcutaneously, the reduction was rapid from the very first application. Why this difference in action? The only explanation is: given by the mouth, ergot, like other fungi and highly nitrogenized bodies generally, must be partially digested or destroyed; hence we fail to get the full medicinal results of the dose, while if it is given subcutaneously, we shall obtain its entire therapeutic power. Theoretically, we ought to reach definite results by giving ergot hypodermically, which we cannot expect when it is given by the mouth. Practically, we find this to be true in case second. "In two cases of hematuria treated by Prof. Luten in the Hotel Dieu of Rhemus, no effects were produced by daily doses of ten grains of the tincture given by the mouth, while daily injections of one grain of the same tincture caused the symptoms to disappear in two or three days." From the rapidity, promptness and certainty of action when given subcutaneously, I firmly believe the day is not distant when this method of administration will be adopted by the profession to the exclusion of all other methods. This same argument will hold good as to many other articles of the Materia Medica.

In *Antagonism of Medicines*, by J. Milner Fothergell, will be found a great number of experiments with various medicines; and in all accurate observations, the remedies were given subcutaneously, and there is an accuracy of dose and a certainty of effect which is refreshing to read, after we have been blundering along in a hap-hazard method of medication.

I would urge upon members of this society to provide themselves with a good hypodermic syringe, and by keeping the needles sharp, and with ordinary dexterity, the minimum amount of pain will be inflicted by this method of medication, and the maximum amount of certainty of action will be gained. I first used ergotine made into solution with distilled water and filtered, but this has the disadvantage of not keeping any length of time, and should be prepared fresh each time, which is a drawback in its use. Latterly, I have been using liquor ergotæ purificatus, manufactured by Park, Davis & Co. This is said, by the manufacturers, to be freed from impurities and all irritating substances, and that each minim represents a grain of the best ergot. Since using it, I have had less complaint of indurated lumps at the site of puncture than with ergotine, and it seems equally efficacious. I have not had an abscess or any near approach to it, only a slight soreness, with some induration, for a few days.

2d. Would ergot injected in any other part of the body or limbs have the same good effect upon the spleen? To this question I am unable to give any practical facts, for I have not tried it in any other locality. But reasoning from analogy, I would say that, by administering it over the region of the spleen, we get the constitutional effect, as well as also the local irritation; and if we derived any benefit from our counter-

irritants formerly, it is an argument in favor of the local effects now. But undoubtedly the greater part of the therapeutic effects must be through the blood on the nervous system; and if this be true, it will matter little where we select our site for puncture. But the moral effect on most of our patients will be much better if we select a point in the vicinity of the organ to be cured: this appeals to their understanding in language they can comprehend.—*St. Jos. Med. and Surg. Rep.* Nov.

GYNÆCOLOGY AS RELATED TO INSANITY IN WOMEN.

Dr. Alexander J. C. Skene is professor of gynæcology in the Long Island College Hospital, and has charge of the gynæcological practice at the King's County insane asylum at Flatbush, under direction of Dr. J. C. Shaw. This institution contains four hundred female patients, affording ample field for observation and practice. This experiment of employing an outside specialist in female diseases has long been urged as of vital importance, but judging from Dr. Skene's experience its importance has been very much overrated. He describes first* the difficulties of investigation under the peculiar circumstances of the case, and the difficulty of obtaining information from the patients or the records. He admits the reaction of mental disease on other organs than the brain, as well as the causative influence of uterine disease in the production of insanity. Either may be primary and causative, or secondary and resultant. The gynæcologist has the advantage in estimating this causative influence, since he can assure himself of the existence of uterine or ovarian disease in his patients and watch the advent of mental disorder in many cases, while for the hospital physician insanity obscures the diagnosis by changing or masking the subjective symptoms. He would rather find fault with gynæcologists for having done so little, considering their opportunities to develop this branch of medical science, than with psychologists. The mistake has too often been made, as in Dr. H. R. Storer's book on Insanity in Women, of attributing too much to reflex action. In many cases of chronic uterine disease the impaired nutrition of the brain, due to prolonged suffering, is the direct cause of the insanity which follows, the local disease being merely the indirect predisposing cause. Exhaustion due to extraordinary functional activity of the sexual organs, as in frequent childbearing, and lactation is an important cause of insanity. This nervous exhaustion may or may not be accompanied by anæmia. Too many other burdens are added, both by rich and poor, to the demands of the age of reproduction. Insanity at puberty may not be due to reflex irritation, but to the mental and, especially, emotional excitement incident to that period.

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*Archives of Medicine, February 1, 1880.

At the menopause imperfect elimination or suppression of an accustomed discharge may account for many cases of insanity. The puerperal state and venereal excess act through exhaustion rather than by irritation. No active disease of the sexual organs is present in a very large proportion of cases of insanity from sexual causes in women, so that local interference is rarely required. Dr. Skene shows much candor and good sense in thus admitting what has already been thoroughly understood by hospital physicians, whose conservatism has been so often denounced.

He next considers the effect of insanity on the reproductive system. Observations were made by him in the cases of two hundred insane women, from seventeen to forty-six years of age, for six months. Eight having died, of the remaining one hundred and ninety-two there were only twenty-seven who menstruated regularly and normally; thirty did not menstruate at all; four, once; eight, twice; ten, three times; eighteen, four times; thirty-four, five times; twenty-four, six times, at irregular intervals; thirty-one, seven times; and six, eight times, during the six months. The impaired general nutrition accounts for the absence of menstruation in most cases. Amenorrhœa is conservative and not abnormal in such circumstances. Deranged innervation, mental anxiety and shock, are also causes of this suspension. It was observed that in those patients who menstruated normally the insanity was of a mild type; and in general menstruation was affected in proportion to the degree of insanity. Excessive menstruation is usually due to uterine disease, and should be taken as evidence of that fact. Its presence is of course easily determined. Functional affections of the uterus are generally favorably affected by insanity, and often disappear spontaneously. This class of diseases therefore needs little attention from a gynæcologist in an asylum. That class of insane who manifest unusual sexual desire, or whose ravings are obscene, mostly suffer from centric emotional disorder. Such cases may have had their origin in some disease or abuse of the sexual organs, which either disappears, or eludes the gynæcologist's skill in the hospital.

Dr. Skene thinks that organic diseases of the uterus, when they exist, do exercise an important influence in causing insanity or in preventing recovery from it. He believes that acute insanity wholly due to disease of the sexual organs will be relieved by curing the primary affection, while chronic insanity will remain after the local disease is removed. He doubts the value of many of the cases reported in current medical literature in which speedy cure has followed local treatment. He gives the headings of a hospital case book, arranged to bring out, by inquiry of relatives, the previous history of the condition of the sexual organs. He finds physical exploration of the pelvic organs of insane women beset with difficulty. It can-

not be accomplished without ether, and he says, in view of the difficulty and injurious after-effects of the ether, the results did not justify the means. Nitrous oxide gas he found more agreeable and its effects occasionally useful. The local treatment does not differ essentially from that in sane patients, except where the co-operation of the patient is required.—*Boston Med. and Surg. Journal*, Nov. 11.

TREATMENT OF NÆVUS.

A correspondent to the *British Medical Journal* states that some time ago he tied a mixed nævus, of the size of a bean, upon the shoulder of a female child, eight or nine months old. Four hours afterward he removed both needles and ligature, with the view of preventing a scar—a plan recommended by Mr. Cooper Forster. Much inflammation was caused by exposure to cold; and the nævus, at the end of two months, was unaffected. The operation was repeated (under chloroform, as before); but at the end of eight hours an attempt to remove the thread failed; it therefore remained in its place. It had been tied tightly enough to cause fluid to exude from the tumor. Next day there was inflammation around the base. He now drew the surrounding skin of the back, chest and shoulder toward the tumor, by means of long strips of plaster, so as to throw it into loose folds (thus relieving tension), leaving the tumor visible in the centre. The redness and swelling quickly disappeared; there was not a drop of pus or other fluid seen; the tumor dried up, and in a few days fell off with the ligature; not thrown off by ulceration, but simply falling like a dead leaf. Since ulceration causes a large scar, and as it probably depends chiefly, as in many other cases, upon the tension of the surrounding skin, this expedient may save marks in situations where it is important to avoid them. The scar in this case was not so visible as even a mild vaccination mark.—*Med. and Surg. Reporter*, Oct. 2.

LEPROSY IN THE SANDWICH ISLANDS.

The *British Medical Journal* informs us that, according to the report of the Board of Health of Honolulu, the Leper Hospital, on the island of Molokai, contained 684 patients on March 31st, 1880, three being children of lepers, and under one year of age. There were 424 males and 260 females. The greater portion of the lepers are treated as out-patients, and it is stated that a large number remain mixed with the people in the several islands. The average mortality among the lepers in the establishment at Molakai, has been nearly 58 per 1000 per annum. Dr. N. B. Emerson, physician to the establishment, states that on the approach of damp and chilly weather in November, there is a general aggravation of symptoms in leprous persons, with fresh eruptions, attended with

chill and fever closely resembling intermittent. Dr. Emerson concludes that, while much may be done to palliate, no curative means have yet been found in this disease. He is convinced that the disease is contagious, and states that, though first introduced into the Sandwich Islands about 1856, there are now thousands of lepers, and the disease is still rapidly increasing among the native population.—*Medical and Surgical Reporter*, October 9.

ALCOHOLIC INSANITY.

Dr. Sutherland recently reported to the psychological section of the British Medical Association the result of his investigations in two hundred private insane patients, half males and half females. Of the males twenty-six and of the females six cases were alleged to have been caused by drink, but on closer examination eight of the male and two of the female cases were those in which alcoholic excess was only a premonitory symptom. The two classes are to be distinguished as follows: When intemperance is a cause the previous habits of the patient are those of a drunkard, and often no other influence can be detected. When intemperance is a symptom some other cause, such as a blow on the head, is found to concur, and the mental symptoms have somewhat preceded the intemperance. When alcohol is the cause the mental symptoms are those of homicidal mania or suicidal melancholia with eccentric conduct. When intemperance is a symptom the mental phenomena are those of mild melancholia or delirium tremens. When intemperance is a cause the delusions are those of suspicion or grandeur; when a symptom they are of a quiet order. Acute cases of alcoholic insanity, in his experience, recovered, but if caused by intemperance the patient invariably took to drinking on his discharge; if drinking was a symptom the patient frequently remained sober. In chronic cases caused by drink there was a continued craving, and dementia rapidly supervened. If, on the contrary, drink was a symptom, the mental condition remained stationary, and the patient was satisfied with a moderate amount of drink.

After a two days' discussion of this subject and the general causative influence of intemperance in producing insanity and idiocy, the president, Dr. J. Crichton Browne, remarked that medical psychologists could not sanction extreme views on either side. Alcohol, he thought, had an immediate deleterious effect upon the highest nerve centres, and might induce insanity in cases where no predisposition existed. Delirium tremens, mania à potu, monomania of suspicion, and alcoholic dementia presented a series of mental diseases due directly to alcohol. It might also be a contributory cause when concurrent with predisposition, nervous enfeeblement, and other causes, or a remote cause by leading to cranial injury, and then aggravating the effects of the blow. He thought the per-

centages of the commissioners in lunacy nearly correct, namely, 21.3 per cent. for males, and 7.9 for females. Mr. Mould reported one case of dipsomania, in which the patient had been maniacal one hundred and fifty times, recovering each time in three days.—*Boston Med. and Surg. Journal*, Nov. 11.

THE RELATION OF MENSTRUATION TO OVULATION.

The *Medical Press and Circular* quotes two interesting examples of the intricacy of this problem.

M. Tillaux brought before the Academy of Medicine of Paris, on August 31st, a woman on whom he had performed hysterectomy a year previously, for a cystic tumor. He had removed the greater part of the uterus and the tubes, leaving only the intra-vaginal portion of the cervix and a very small stump of the supra-vaginal portion. Both ovaries were preserved, but there was complete interruption of the connection between them and the trunk of the uterus which was left. Since the operation the woman had menstruated regularly every month; the periods lasted three or four days, but have been less abundant than before the operation. M. Tillaux has ascertained by examination with the speculum during menstruation, that the blood comes from the stump of the uterus and not from the vagina. With regard to the genital functions, the woman declared to M. Tillaux that they were performed better than ever, from all points of view As a kind of contrast M. Tillaux, last November, removed from a girl, aged twenty two, both ovaries, which were diseased; since the operation the girl, who is wonderfully well, has menstruated every month exactly. From these cases we must conclude that the physiology of menstruation, in its relation to ovulation, which was considered as a question long settled, requires new researches to account for these contradictory facts.—*Med. & Surg. Rep.*, Nov. 6.

ULCERATION OF THE BOWEL FOLLOWING THE INJECTION OF A PILE WITH CARBOLIC ACID.

Mrs. J. H. W., from an interior town in Kentucky, consulted me at the instance of her family physician, for rectal trouble, in July last. She gave this as the history of the affection: For several years she had suffered with what she had supposed to be internal piles. The first few months she lost blood both at stool and in the interval. Nothing at that time protruded from the bowel. Later on, however, the bleeding seemed to check, and a protrusion of a tumor would take place while at stool. After action the protruding part would retract of itself. Very little pain was experienced during the entire time, but for the inconvenience she sought the advice of an advertising physician. He diagnosed the case as one of internal piles, and recommended an operation. An injection of the tumors was practised, consisting, it was inferred, of carbolic acid, of what strength is not known. The piles sloughed, and the woman

believed herself to be cured, but after her return home pain manifested itself at stool, which would continue for hours after. The condition continued to grow worse until the time of her application to me. Upon an examination, an ulcer was found above the external sphincter muscle, and bordering upon the internal. It was about one-half inch in diameter, and looked very angry. It was caused, as could be very easily seen, by the sloughing of the tissues from the injection into the pile. She was at once put upon the proper treatment, but it was some weeks before she could be pronounced well. This is but one out of a number of cases of ulceration following the injection of carbolic acid into piles, that has been seen by the writer, and is cited to show that sloughing is one of the immediate dangers to be anticipated in the carbolic acid treatment of piles.—*Louisville Med. Herald*, November.

THE TWO BOGUS COLLEGES FINALLY WIPED OUT.

The American University of Philadelphia and the Eclectic Medical College of Pennsylvania, known to the community as Buchanan's Colleges, were, on September 30th, finally wiped out of existence. J. Howard Gendell, who represented the Commonwealth of Pennsylvania, filed his replication to the answers, put in by the colleges some time ago, to the quo warranto proceedings against them. The answers of these two corporations were, that they had a right to exercise their franchises, by acts of the Legislature. Mr. Gendell's replication set out substantially that the colleges forfeited their rights under those acts, because they conferred degrees upon persons not possessing the qualifications prescribed in their charter; by selling diplomas; by granting degrees for doctor of medicine and antedating the diplomas so as to make it appear that the party had a right to practice medicine; and finally, by issuing diplomas with forged signatures. After the replication was filed the counsel for Dr. Buchanan confessed judgment of ouster, and filed, as part of the record, a letter from Dr. Buchanan instructing him to do so. — *Medical and Surgical Reporter*. October 9.

REACTION FOR QUINIA.

It is somewhat troublesome to make a solution of chlorine in water for the purpose of testing for quinia. It is likewise difficult to keep such a solution very long without its undergoing such a change of strength as to render it unreliable. We have thoroughly tried a solution of bromine in water, which has been frequently recommended as a substitute for the chlorine water, and find it delicate and perfectly reliable. In all cases preference should be given to the bromine solution. It is easily made and keeps its power indefinitely.—*Chicago Med. Review*, October 20.

Editorial Department.

DR. GEORGE HOWE'S CASE OF FEVER, WITH A LETTER FROM HIMSELF TO ONE OF THE EDITORS, AND WITH ADDITIONAL REMARKS BY SENIOR EDITOR.

Dr. Howe's case (clinical notes given to Dr. Saunders of Mississippi). Name, Amoretti; nationality, Italian father, Creole mother; age, 8½ years; sex male, initiatory child; 2, A. M., September 5th, 1880, left point Michel (on lower coast) day before he was taken sick, in consequence of four deaths occurring in the houses of Giordani, 200 feet distant from Amoretti's residence).

Seen by Dr. Howe, 10, A. M., September 5th, temperature in axilla 103½, pulse 123: 4, P. M., temperature 104½, pulse less frequent. Temperature remained from 104 to 104½, and pulse declining to 90 per minute by morning of 7th: Had suppresion of urine on second day, 48 hours after first visit; had black vomit 50 hours after first visit. Urine not examined by tests; conjunctiva highly injected at first, gradually lessening. No convulsions, but great jactilation; died, 10, P. M., 7th September; yellowness of skin very pronounced soon after death. Dr. Jones saw child's body on morning of the 8th, about 12 hours after death, and pronounced it a case of malarial hemorrhagic fever. Yet as President of the State Board of Health, refused to give certificate, or to allow it to be buried in the city cemetery, where the family had a tomb; also refused to permit the body to be carried back to Point Michel, giving as a reason for his refusal, that if a case of yellow fever, or a suspicious case should by any means occur on the line of route to the cemetery, complaint might, and would likely be made. Ordered the child to be buried on the premises where it died, which was done.

Dr. Howe says, if he had seen the case in 1878, he would have pronounced it yellow fever, but in this instance, and under these circumstances, preferred that Dr. Jones, President State Board of Health, should see the case and diagnose it,

though he was unable to secure his attendance or presence until after death, not however, from any fault of Dr. Jones.

The child above mentioned, had lived all summer in a house (as stated before) only two hundred feet from the house of Giordani, in which four deaths had occurred—within a week or ten days—before said child left Point Michel, and there were two cases sick in Giordani's house at the time the Amoretti child left. The cases in Giordani's house were treated by Dr. Hays. The Amoretti child was in frequent intercourse with the Giordani family. Giordani owns a lugger and is engaged in the fruit trade and general traffic up and down the river.

Dr. Renshaw, on Hancock street, had a case of child six weeks ago, on corner of Flood and Love streets. Black vomit; recovered.

In connection with Dr. Howe's case, I neglected to mention the fact that he, Dr. H., was called to see a younger child of Amoretti on the fourth day of their arrival from Point Michel. Said child was sick when it left home. Dr. H. said he had the usual symptoms of dengue, and recovered without any suspicious symptoms. Dr. H. also attended one or two other cases of dengue in the Amoretti family, presenting no unusual symptoms and recovering promptly. He had no case of fever of any kind in vicinity of Amoretti family, since two last mentioned, which occurred three or four weeks ago.

DR. HOWE'S LETTER.

NEW ORLEANS, October 30, 1880.

W. H. WATKINS, M.D., *Editor, etc., N. O. Med. and Surg. Jour.*

Dear Doctor:—Yours of 24th inst. reached me on evening of 28th, and would have been attended to ere this, but for want of sufficient leisure.

The report of Dr. Saunders is the substance of a conversation had about three week's since, and, except in some unimportant matters, which I have taken the liberty to modify, is substantially correct. The Amoretti family reside at Point Michel, about one arpent (200 feet) from the Giordani family.

Giordani had lost four children in a few days, and the Amoretti family, desiring to escape, came to a relative's residence one mile below U. S. Barracks. While on the way to the boat from their home, they were solicited by Giordani's family to take with them, one child, the only one not yet ill, two others then being sick. They arrived at Mr. Solis' (the relative), and during the night a child of Amoretti was taken ill. I was sent for. This child had dengue and recovered.

At the time of my first visit another child was asleep in the bed with the sick child, and upon my asking if he was also unwell was informed, no, that he had been awake nearly all of previous night and had been permitted to sleep late, and accommodations being limited he was placed in the bed with the sick child. I returned to the house in the evening and the children were both in the bed. Yet the oldest had not complained and did not appear to be ill, and I gave him no particular notice. Next morning, 5th September, I was informed that about 2, A. M., he had complained of being cold and soon after he was found to have fever. The family supposing his to be the same illness as that of the younger child, did nothing until my arrival, about 9, A. M. The excessive temperature, dry skin and some congestion of conjunctiva led me to suppose his would be one of the most violent forms of the prevailing disease; and after a mercurial purgative, gave diaphoretics, he, like the other members of his family, persistently refused to take anything, and the efforts of the family seemed to distress him so that they desisted, and upon my arrival, 4, P. M., I found the temp. 104¼, pulse 125; the morning temp. 103¾, pulse 128 to 130. Desired the family to use persuasive efforts to obtain consent of invalid to take his diaphoretic mixture; ordered hot foot-baths, sponging with tepid water and cool application to head.

Next morning, 6th September, 9, A. M, temperature 104½, pulse about 100, very restless; frequently sighing, and obstinately refusing even a drink of cold water; recognized that this was *not* dengue; had urinated just before my arrival, and vessel emptied.

4, P. M.—Temperature 104 to 104½; pulse 95 to 100. Very restless and so contrary that it was hardly possible to get accurate results. Did not appear to understand, or was so stubborn that he would not understand or reply to inquiries. Tried by 8, P. M. almost every means to obtain urine—there was none. Informed the family that a fatal result could be expected. About 8, P. M. black vomit began and continued at intervals through the night. The clothing saturated with it was kept for my observation.

7th. 9, A. M.—Rolling from one side of the bed to the other. Vomiting frequently. Pulse about 90; broke my thermometer in an attempt to obtain temperature, but believe it to be 104, as in the evening before.

4, P. M.—Had vomited during the day and passes from the bowels matter similar to that vomited (did not see this). Saw that he was dying and upon arrival home addressed a note to Dr. Jones, President Board of Health, informing him of the condition of the patient and the history of the case, requesting him, if possible, to go with me in the morning.

8th.—At 6, A. M. Dr. Jones called at my house and we at once proceeded. Upon arrival found the child dead; had died the evening previous, about 8, P. M.

The yellow color was not as marked as I have seen it in some cases of yellow fever, and more so then in some that I have seen. Conjunctiva not much colored. Gums apparantly normal; body *entirely* colored light yellow, dusky or dingy.

Dr. Jones asked me if I had pronounced upon the case. I told him no. The family and relatives freely said it was yellow fever, but that I desired him to make the diagnosis officially, so that any statement coming from such authority would give greater confidence and relieve me of the responsibility of a declaration which might be fraught with such disaster to commerce and the general quiet of the city.

He diagnosed "malarial hemorrhagic fever" and so informed the family and friends. I acquiesced, believing that any difference of opinion could be discovered at some other time and without occasioning unnecessary alarm.

The statement about the burial of the child is correct and I was amused at the Doctor's embarassment for a satisfactory reason *why* they could not bury in the city, a child which, according to his own declaration, had not died of yellow fever, but of an inoffensive, non-contagious disease; nor could they obtain permission from him to transport the remains on the packet to their country home. The only solution of the difficulty was to bury on the premises, which was done that morning.

The Amoretti family, disappointed in their efforts to escape the pestilence, concluded to return to their home, which was done a few days after the child's death, taking the Giordani child with them.

Some ten days after their arrival at home a third child took sick and died like the brother, in a few hours and with same symptoms. About October 5, the Giordani child, which had accompanied them in their flight and returned with them, fell ill and died of same trouble—being the 5th child which died in Giordani's family of same disease.

You were kind enough to suggest that "my opinions" would be of service to you, I fear, however, they are not the result of sufficient observation to be of value, although I have been through every epidemic since 1853, having had yellow fever that year in Natchez, Miss.

My views and convictions are at your service. I do not hesitate to express my regret that the evident purpose of many of our professional brethren is to give new names to old diseases or (sub-divisions of trouble)?—they may have a wise purpose before them, and there will be no danger of panic at the mention of malarial hemorrhagic fever, but in my opinion malarial hemorrhagic and yellow fever are the same, the few sporadic cases thus named occur because the meteorological and other conditions necessary for a general epidemic do not exist. Dengue is closely related—a lesser grade, because of a lesser cause.

Yellow fever as yellow fever cannot be so diagnosed, until each and every physician feels that the burden of responsi-

bility of so declaring it has been placed upon other shoulders, than his own, and that the press will not denounce him as an alarmist in unmeasured terms.

During the past summer I met with many cases, which bore so close a resemblance to the epidemic of 1878, that they were identical as far as I could determine, and Dr. Renshaw repeatedly, during the summer, called my attention to that fact as it occurred so frequently in his practice also. I am very loth to enter into any controversy or discussion as to the above, knowing that so large a number of the greatest professional lights, differ with my views, but as the honest convictions of an individual, I utter them, and if they are of any service to you, you are welcome.

Yours in haste,

GEO. HOWE, M. D.*

REMARKS BY SENIOR EDITOR.

I have been asked to accompany the above clinical notes and letter, by such remarks as should be thought proper to be made.

The functions of a medical editor are sufficiently magisterial in character to require him to maintain a constant supervision of all matters connected with, or in any manner affecting the advancement and welfare of his profession. If he is faithful and zealous, he will not hesitate to rebuke error and heresy whenever and wherever discovered. This duty, however, ought to be accomplished in a very impersonal manner, in order to occasion no pain, or angry feelings where such consequences can be avoided, but when a flagrant transgression is the matter *sub-judice*, it must sometimes occur that the medical editor should be permitted to enjoy that delicious satisfaction in discharge of bounden duty, that old Nathan probably experienced, when with finger pointed at the dread monarch, he exclaimed: "Thou art the man."

In any comments to be made in this connection, I do not propose to go beyond the gentlest expostulation with my profes-

*Dr. Howe is a graduate of New Orleans School of Medicine, and former resident Student New Orleans Charity Hospital; also had at one time charge of the Mississippi River Quarantine Station.

sional brethren; nor even to employ this method, except where I think it warrantable.

But I do wish to implore my professional friends, in and around New Orleans, to follow the good examples found in this issue of the JOURNAL, and to place on record all facts heretofore unpublished, which relate to anomalous, suspicious, or disputed cases of disease.

I believe it is a fact well understood by the medical profession of this city, that an unusal number of peculiar cases of sickness have occurred during the summer and early autumn of this year. The facts attending them remain to this time unrecorded in such a manner, that the whole profession is able to profit by them. If I may be pardoned, I will support the above statement by a more particular reference to these cases, but in doing so I have violated the confidence of no one, neither do I reflect in any manner upon any one of the many gentlemen who may suppose themselves to be alluded to.

It is a matter of current report among practitioners here, that black vomit has marked the clinical career of at least twenty cases of some form, or forms of fever, which prevailed in this city. No facts connected with them have been published except by my editorial colleague, Dr. Watkins.

Last summer, in discharge of certain official duties, I reported some cases of "black vomit," as being "suspicious" in character. That term was greatly objected to in this city, both in official and unofficial circles. While as a sanitarian and custodian of public health, I shall obstinately refuse to change the word, or apply it in a different manner. I have no sense of duty in an editorial capacity, which requires me to be especially pugnacious about its employment.

The word "ambiguous" might be substituted without essential damage to the present general understanding of the nature of these cases. This word is certainly quite appropriate if it carries with it an idea of uncertainty or variability of nomenclature, as well as of nature. A man might reasonably object to being looked upon as "suspicious," who in walking the distance of a square, should be accosted by three friends, who respectively accosted him as "Bill Smith," "Tom Jones" and

"John Brown;" but he could not possibly complain when told that his aliases rendered him "ambiguous."

But whatever names we may give these cases, or however we may look upon them, either individually or collectively, I do think the facts connected with them should be placed on permanent record. It should have been done at the time of their occurrence, but as it was not done then, it should be now.

The love of truth which should at all times, and in all places, distinguish our profession, calls for their publication; science earnestly expects it; the interests of public health require it; and, lastly, for the future welfare of New Orleans, whether in a sanitary or a commercial point of view, let us under all circumstances declare the truth.

In these remarks I do not intend to intimate that all these cases were yellow fever, but on the other hand the presumption would be a very violent one which held that none of them were examples of that disease. They occurred at a season of the year when yellow fever is likely to prevail, after a positive instance of importation of infection, and in so far as I can gather from meagre facts at my command, showed tendency to an arrangement in groups both as to dates and localities.

Let us scan these cases and attendant circumstances, and endeavor to draw a line of diagnostic demarkation satisfactory to the world, and to ourselves. It is well known by most of the profession of New Orleans, that two highly respected practitioners made a positive diagnosis of yellow fever in one of their patients, some time during the month of August, and that one of them reported the case to the President of the State Board of Health.

Here, as far as I can learn, all knowledge of the case has rested until the present time.

In medical science, concealment, or wrong interpretation of facts connected with cases of disease, is an obstruction and a step backwards, towards periods when we had not reached our present degree of enlightenment. In public sanitation they are worse faults, for they are not only constant impediments, but they often occasion fatal epidemics.

The importation of yellow fever into Key West, this year,

was due to infection brought in the baggage of a lady whose three children had died with "fever," in the West Indies. "She did not know what kind of fever it was, but they vomited black and turned yellow before dying."

The Amoretti child might by a similar accident, have been brought to a crowded hotel, or boarding house in this city, and from thence the infection distributed over large portions of the country. In these days of quick transit by railroads intersecting every part of the South and Mississippi Valley, physicians must awaken to the fact, that their responsibilities are awfully increased.

As often as epidemics of fatal infectious diseases are spread to other communities from concealment on our part; or wrong diagnosis on our part; or reticence on our part in giving the disease its correct name, that often will those populations attribute their losses and bereavements to our neglect of sacred duty. For the the sake of humanity and our good reputations, and our unburdened consciences, no considerations of commerce, or of filthy lucre, should tempt us to connive at wrongdoing which may chance to inflict sickness and death upon our fellow beings. S. M. B.

AMERICAN PUBLIC HEALTH ASSOCIATION.

Shortly after the issue of this number, the American Public Health Association will assemble in the city of New Orleans. Anxious to aid every movement looking to improvement in sanitation, the Editors of this Journal have endeavored to awaken such interest in this coming meeting as may help to secure a large attendance, composed of the best and most influential citizens of our common country. But we have especially striven to interest the Southern people in this convocation. In the South, where so much ought to be done, and where so much can be done, for the prevention of disease and the improvement of public health, we are but commencing to learn the alphabet which prefaces this beneficent science and art.

We have throughout this vast delta and valley to contend with the subtle enemy to public health, which environed ancient Rome; but Rome held it in abeyance in a period of

the world when the formulas of disinfecting chemistry were unknown. But we have also to be on the constant watch to prevent the inroads of an enemy unknown to those ages, unless Niebuhr is correct in supposing that yellow fever was one of the plagues of Athens. Malaria can be conquered by means well understood. Yellow fever is undoubtedly a preventible disease. Let us meet on this occasion and in the multitude of counsel seek wisdom. The constitution of the Association reads as follows in its second and third articles: "It may be understood, therefore, that the Association opens its doors to every person who has the head and heart requisite for rendering aid to its good work." 2. *Object.*—The object of this Association shall be the advancement of sanitary science and the promotion of organizations and measures for the practical application of public hygiene. 3. *Members.*—The members shall be selected with special reference to their acknowledged interest in, or devotion to, sanitary studies and allied sciences, and to the practical application of the same. They shall be elected as follows:

Each candidate for membership shall first be proposed to the Executive Committee in writing (which may be done at any time) with a statement of the business or profession, and special qualifications of the person so proposed; on recommendation of a majority of the committee, and on receiving a vote of two-thirds of the members present at a regular meeting, the candidate shall be declared duly elected a member of the Association. The annual fee of membership shall be five dollars.

We hope that the coming meeting will prove to be a grand success in its noble aims, and that socially it will be so enjoyable that each one present will say that it was good for him to have been here. We have in this city hospitals and other medical institutions and associations worthy of the attention of our visitors. Last, but not least, they will meet with a most cordial welcome from a corps of educated physicians, and a body of enlightened citizens, who fully appreciate the great aims in view, and who socially will spare no exertions to render their stay among us in all respects agreeable.

CORRECTIONS, ETC. OF PROF. CHAILLÉ'S ARTICLES ON YELLOW FEVER.

In the three articles by Dr. Chaillé on yellow fever, in the September, October and November Nos. of this JOURNAL, occur at least as many errors on the part of the printer, proof reader, etc., as are usual, and in the last articles nearly twenty blemishes have been detected. It is believed, that the number of errors would have been fewer had not the author's absence from New Orleans, deprived the JOURNAL of his supervision of his articles while passing through the press. Most of the errors committed are easy to detect and to correct by the reader, for which reason, as also because these articles constitute a part of the Final Report of the Havana Yellow Fever Commission, yet to be published, and with corrections and additions, it is not deemed necessary to detail numerous errors of little comparative consequence.

There, however, are two errors, sufficiently important to demand correction, in the article on "The Alleged Spontaneous Origin of Yellow Fever on Ships," in the November No.

The first sentence on p. 403, should read: "Subsequent writers have done *little* more, etc."

The third sentence on p. 423, has been so printed as to be incomprehensible, and should read: "Of the remaining 216, *there were* 96, which were anchored in central parts of the open harbor, therefore distant from the shore, and it deserves special notice, that not one of these became infected, although 35 of them *were* anchored in the harbor more than 15 days, and several of them for more than 50 days."

NEW ORLEANS, November 18, 1880.

Editors New Orleans Medical and Surgical Journal:

GENTLEMEN.—By an oversight my name was not appended to my letter published in the last number of the New Orleans Medical and Surgical Journal.

Very respectfully yours,
GEO. M. STERNBERG.
Surgeon, U. S. Army.

Obituary.

DR. CHARLES DELERY.

The subject of this notice was born in the parish of St. Charles, Louisiana, on the 28th January, 1815. Boisclair Chauvin Delery, his father, was the great grandson of the Chevalier d'Arensbourg, a Swedish officer, one of the companions in arms of Charles XII. The Chevalier d'Arensbourg arrived in Louisiana on the 4th June, 1722, at the head of a company of Germans, two hundred and fifty strong. Gayarre, in his history of Louisiana, states that in 1723, after the bankruptcy of John Law, the lands which had been ceded to him in Arkansas were vacated by the colonists whom he had brought out from Alsace and Germany, and who, finding themselves abandoned by their patron in consequence of the collapse of the great Mississippi bubble, came to New Orleans in the hope of being supplied with transportation to their native lands. Instead of yielding to their desires in this respect, however, the colonial authorities donated to these strangers lands on both sides of the Mississippi river, about twenty miles above New Orleans. The government of this new settlement, located in that part of the State which is now known as the parishes of St, Charles and St. John the Baptist, was entrusted to the Chevalier d'Arensbourg, and the settlement itself, from the nationality of its occupants, was styled the *Côte des Allemands*, or the *German coast*, by which name it continues to be designated to the present day. Dr. Charles Delery was born on his father's plantation, situated on this German coast. In 1829 he went to France, where, after taking the usual classic and scientific degrees, he studied medicine, graduating at the School of Paris in 1842. Shortly after this he returned to Louisiana and entered upon the practice of medicine in the parish of Jefferson. A biographical sketch of Dr. Delery appeared in the "Living Writers of the South" in 1867, and from this publication some of the following data are derived. He was in the habit of writing for the newspapers; his articles usually dealt with practical subjects in which the community were directly interested, and he devoted considerable attention to medical journalism, founding in 1852 the *Union Médicale*, to whose columns he was an assiduous and earnest contributor. His published works are:

An *Essai sur la Liberté*, which appeared in 1847, and was written in French, as are all his works; *Etudes sur les Passions suivies d'un aperçu sur l'Education qu'il convient de donner au Peuple; Quelques mots sur le Nativisme*, published in 1854, a political treatise upon the political issues of the day—native Americanism and immigration; *Fièvre Jaune*, a treatise which was printed in 1859 in relation to the epidemic of 1848.

In 1859, also, Dr. Delery who was then living in New Orleans, delivered an inaugural address before the New Orleans Medical Society; this discourse was afterwards published in pamphlet form. Dr. Delery was city physician in New Orleans for seven years before the breaking out of the war of secession. In that capacity he labored zealously to improve the condition of the Insane Asylum, making a report on the subject to the Board of Aldermen in 1860. The exciting events, which crowded each other in such rapid succession during the next few years, put a stop however to the execution of the measures which that report had called into life. Before the war Dr. Delery was, also, for two years, President of the Board of Health, and in 1858 he was sent as a delegate to Philadelphia, to attend a meeting of the various Boards of Health of the United States called together for the purpose of considering the question of quarantine.

Dr. Delery took great interest in politics, and at the beginning of the struggle between the North and South he was a Union man, being a candidate for the convention on the same ticket with the Hon. Pierre Soulé. This ticket was defeated; but the war once fairly begun, Dr. Delery's feelings carried him into the camp of his former adversaries, and he became a warm and devoted adherent of the Confederacy. It will be remembered that during the rule of Gen. Butler in New Orleans, on the 24th September, 1862, there was promulgated *General Order No.* 76, according to the terms of which all persons, male or female, of the age of eighteen years and upwards, within the limits of the Military Department of the Gulf, who had ever been citizens of the United States and had not renewed their allegiance before the date of publication of this order, were required to report to the provost marshal a descriptive list of all their property, and to "receive a certificate from the marshal of registration as claiming to be an enemy of the United

States," under penalty, in the event of non-compliance, of "fine or imprisonment at hard labor, or both," with confiscation of all property. Dr. Delery was among the first to claim his certificate as a *registered enemy* under the terms of this order. Residents of New Orleans, at that gloomy time, have not forgotten the exodus of citizens who went into banishment in consequence of the above edict. A Spanish man-of-war, the *Blasco de Garay*, was then lying off New Orleans, and her commander, offering the hospitality of his ship to a number of these *registered enemies*, sailed with them to Havana. Dr. Delery was among the exiles who left the city on board the *Blasco de Garay*. He remained in Havana two years; during this period of feverish anxiety he was not idle, his ready and caustic pen furnishing many earnest pages in support of the Southern cause. Principal among these political writings was a pamphlet which was published in Paris in 1864, in reply to a memoir entitled *le Roi Coton*, in which the author, who was no less a personage than the well known Eugene Pelletan, unfairly and unjustly aspersed the South. At the conclusion of the war Dr. Delery returned to New Orleans, and in 1866 he was elected coroner. In 1868 he published a *Mémoire sur l'Epidémie de Fièvre Jaune qui a regné à la Nouvelle Orléans et dans les campagnes*. Of this pamphlet, which is quite lengthy, the biographical notice mentioned above says: "This is the most lengthy publication by our author, and it contains, besides the discussions and views of the writer upon the epidemic, a large collection of statistical information relative to the disease and matters incidental to it, or to its treatment, causes and cure. The work shows much learning and careful research. Dr. Delery took the ground that creoles or natives could and did have yellow fever. This belief occasioned considerable discussion and opposition on the part of those who favored the contrary doctrine, which was clung to with a tenacity of which the local medical literature of the years gone by gives ample testimony, and which finds partisans in other localities where yellow fever is observed, as is shown in regard to Cuba by the recent publication of an article in the August number of this journal.*

*Acclimatisation or Acquisition of Immunity from Yellow Fever, by S. E. Chaillé, M. D., Chairman of the Havana Yellow Fever Commission.

During the period of reconstruction Dr. Delery took a lively interest in the woes of Louisiana, although he was living at that time in an adjoining State. His facile and caustic wit found ample field for exercise in assailing the travesty of government under whose yoke his native State groaned. He wrote various articles for the press during these years of affliction, and in 1877 published *L'Ecole du Peuple*, a comedy in one act, in verse, no better idea of which can perhaps be given than by translating the following lines from the preface: "Language is powerless to express the feelings of Southern men during these eight years of humiliations, pillage, privations and discouragement, often verging upon despair. For a time, it seemed as though God were eclipsed by this atmosphere of corruption." In the *Ecole du Peuple* the comic element is introduced on account of its teachings; for, as the author remarks: *Castigat ridendo mores.*

A few years prior to his death, Dr. Deléry, withdrawing from the whirl of a busy life in the city, retired to enjoy comparative rest at the Bay of St. Louis, in the State of Mississippi. Here, he continued to practice medicine, occasionally writing on some subject which offered present interest. Thus, some months after the close of the yellow fever epidemic of 1878, he prepared and published a memoir on *Quarantine*. For years, Dr. Deléry had been a consistent and conscientious opponent of quarantine as a preventive of yellow fever, and this memoir was the expression of his peculiar views on the subject. An enthusiast in his profession, Dr. Deléry was however possessed of a power of cool discrimination which made him skeptical with regard to professional doctrines and theories. Gifted with a keen sense of the ridiculous, he readily appreciated the foibles and shams of humanity, being ever ready however to throw the mantle of charity over the former, and passing the latter by with silent contempt. To his brother physicians he was scrupulously courteous, never departing, even in the heat of scientific controversy, from that calm dignity and urbane manner which endeared him to all.

Thoroughly disinterested and above mercenary considerations he was a friend to the poor and the distressed. Truly may it

be said, that no unfortunate ever asked of him without receiving that full measure, which comes from a heart overflowing with kindness.

He died in harness, working to the last; a very few days only elapsing from the moment when he was stricken down, to that, when he passed to his reward, on the 12th June, 1880.

Reviews and Book Notices.

Circular No. 3 of the Board of Health of the State of Alabama. This includes the Annual Report of the Board of Censors and Committee of Public Health; an essay by Dr. Peter Bryce, Superintendant of the State Insane Hospital at Tuscaloosa, on The Mind and How to Preserve It; another, on Drainage and Underdrainage in their Sanitary and Economic Aspect, by Dr. S. D. Seelye; and a third, on The Theory and Practice of Quarantine, by Dr. Jerome Cochran.

In the first essay, Dr. Bryce assents to the common assertion of specialists in nervous diseases, that insanity is rapidly on the increase. Like them, he attributes a great share of the increase to the more artificial habits and pursuits of our modern civilization, which stimulate unduly the nervous system by exercise of the mental powers. This may be really, though not necessarily, true, for we do not admit that judicious exercise of any powers is injurious to the balance which constitutes health; and the increase of mental diseases at present is only an offset for maladies due to abuse of other organs than the brain in earlier times.

We agree with Dr. Bryce, that there is an *apparent* increase of insanity, due to the fact that cases are now rarely concealed, while it was quite common formerly. To this should be added the fact that mental alienation is now more generally recognized, both by medical men and by the laity. But we cannot assent to his assertion that the skepticism of the present day is at all chargeable with the production of insanity. On the other hand, religious excitement has often ended in mania, and the gloomy doctrines of some sects have been fruitful sources of religious melancholia. Between fanaticism and in-

sanity there is certainly no well defined line of separation. On the whole, therefore, we must actually regard skepticism as a safeguard against those nervous excesses which lead to loss of mental balance.

Of Dr. Seelye's paper we have only space to say, that it meets our unqualified approval. It gives an excellent showing for the advantages of underdrainage in a sanitary sense, as Col. Waring had previously done in an economic sense by a work on a kindred subject.

Dr. Cochran, in his paper, uses the term *quarantine* in a more extended sense than we have ever before observed—as synonomous with prophylaxis, and including all measures of prevention relative to infectious diseases. He assumes that yellow fever is an infectious disease, "propagated by a specific material poison," composed of organic particles which multiply by generation, and that it is transportable; also, that the disease is not indigenous to Alabama, every outbreak being due to the importation of specific germs.

The subject is taken up under five different heads: (1.) International quarantine, having reference to protection seaward; (2.) Inter-State quarantine, that is, against the introduction of disease from neighboring States of the Union; (3.) Intra State quarantine, or protection of one part of a State from another infected portion of the same State; (4.) Municipal quarantine, having reference to the protection of the uninfected parts of a town after the disease has effected a lodgment; (5.) Personal prophylaxis.

Under the first head he remarks truly, that the principal point of danger is the port of Havana, from which yellow fever has been conveyed to Southern ports more often than from all other places put together. He then enumerates three problems for consideration: (1.) That of the infection of ships; (2.) That of the disinfection of ships; (3.) That of the quarantine of ships. As vehicles to convey infection he reckons the following, in order of importance: (1.) Persons sick of yellow fever; (2.) The clothing and bedding used by them; (3.) Various goods from infected houses or ships. We should reverse the numbers 1 and 2, for the rule has always been that a hospital

will receive cases of yellow fever without any of the previously received patients contracting the fever, until cases occur outside in the immediate neighborhood. The Touro Infirmary, of this city, situated near the river, and about midway between its two extremities, has received cases of yellow fever almost every year since the war, and, it is said, no case has originated within its walls.

We cannot quite assent to this test: "When we find that unacclimated persons have made long voyages without contracting yellow fever, we are warranted to conclude that the ship is free from infection." The case of the "Excelsior," at New Orleans, in 1880, indicates that a crew may live for weeks in safety over an infected hold and cargo, until they enter the infected spot. Then the susceptible ones sicken with the fever. As the crew may all be acclimated, it is evident that the report of "no sickness during the voyage" is no warranty of absence of infection.

Disinfectants are defined by Dr. Cochran to be "agents which destroy or render innocuous the zymotic poisons which generate epidemic diseases." He adds that "these zymotic poisons are universally held to be constituted of living germs." While indisposed to question the validity of the "germ theory," and even accepting it provisionally, we must remind Dr. C., that this theory is by no means universally accepted, and that to those who reject it *disinfection* is an unmeaning word.

As disinfectants he recognizes (1) extreme cold; (2) extreme heat; (3) various chemicals; (4) ventilation. The examples of failure of refrigeration in the cases of the "Susquehanna," and the "Plymouth," do not discourage him. As they stand almost alone, he assigns the failure to "some undiscovered fallacy," which may be reasonable. A temperature of 250°, F., he regards as certainly destructive to yellow fever infection, and that of 212° probably so. It is proper to observe here that it is not safe to reason positively from experiments with one kind of organism to the behavior of other and untried kinds under the same conditions. It is known that some organisms tolerate very high temperatures and others very low; and it should not be forgotten that the germs of yellow fever are still hypo-

thetical. For the present we must be governed by careful observation of the extreme conditions of survival of its infection; and we should bear in mind that high or low temperature, within some unknown limits, may render germs dormant without destroying their life.

While recognizing the efficacy of such chemical disinfectants as sulphurous acid and chlorine, he properly observes that they cannot be depended on in a loaded ship. For thorough work not only must the cargo be discharged, but the bilges must be opened and their foul contents removed, so that this space may be purified and disinfected. The use of heat as a disinfectant is considered impracticable, on account of damaging the vessel and its cargo. Cold is in most cases unobjectionable, and, with suitable appliances, might operate on vessel and cargo together. With an iron hull in tropical waters, we apprehend that the difficulties would be at present insurmountable.

In the disinfection of contaminated clothing, bedding, etc., he recognizes washing, boiling, super-heated steam, dry heat and refrigeration, but says nothing of chemicals. Chlorine should be rejected, as too destructive to fabrics, but sulphur fumigation should be included as a valuable method, and chloride of zinc as a useful adjuvant to boiling water.

After all, however, he avers that absolute immunity lies only in total non-intercourse with infected places. For small communities exposed to near danger, this is the cheapest protection, and often the only one, from want of skill and means to put other methods in use.

The plan of keeping medical inspectors in the principal foreign ports regarded as dangerous, to give notice of the existence of disease there and of the sailing of infected vessels, is properly recommended as a measure of the utmost importance.

In introducing the subject of Inter-State Quarantine, Dr. Cochran gives to New Orleans a pre-eminence similar to that previously accorded to Havana. We can not deny the impeachment as deserved for the past fifty years, but hope for improvement. But when he asserts, "It is the opinion of a large majority of the physicians of New Orleans, perhaps of

nine-tenths of the whole number, that yellow fever is not indigenous there, and that every new epidemic outbreak of it is due to new importation," we fear that he is not quite correct, though we should be very happy to agree with him, if possible. There are still enough of the older practitioners left, who flourished when our city was annually visited by yellow fever, and in an epidemic form about one year in three, to maintain a considerable acceptance among our population, that the fever is endemic to our locality; and they should ponder this warning, already somewhat familiar: "One thing, at least, is certain, New Orleans must keep herself free of yellow fever, must cease to be a standing menace of danger to the communities that are connected with her by railway and water communication, or else she must expect to see an absolute embargo of traffic and travel proclaimed against her, year after year, by all the States that are liable to receive infection from her."

On the subject of railroad quarantine, he condemns the plan of establishing transfer stations for passengers and goods, on the ground that these places would become infected and thus spread the disease. We think this could be obviated by subjecting the transfer station to the conditions of a maritime quarantine station: that is, disinfect the goods and the clothing worn by passengers; subject passengers to change of clothing at the station, disinfecting their suits in detail, and enforce thorough ablution; keep the station, including buildings and grounds, thoroughly guarded from intrusion and desertion. Try again the value of carbolic acid as a disinfectant of surfaces—the ground around the station to be repeatedly sprinkled at short intervals. Of course select some previously uninhabited spot for the transfer station, and keep it secluded.

On the subject of Intra-State Quarantine, he recognizes the important principle that a limited portion of a city only may be infected for a time, or for the whole season; but he is incorrect in stating "there was an outbreak of yellow fever in one neighborhood in the fourth district, while in the rest of the city, with a population of more than 200,000 souls, there was not a single case." In reality, cases occurred in every district of New Or-

leans in 1879, but there is good reason to suppose that only the front portion of the fourth district became unsafe ground.

Further space cannot be given to notice this paper. Its general soundness and excellent expression have commended it to minute attention at our hands, and we hope it will have wide circulation through the Southwest. The established reputation of the author will give it higher authority than our commendation. S. S. H.

Index Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. I. A—Berlinski. With a list of abbreviations of titles of periodicals indexed. 4to. Pp. 888. Washington: Government Printing Office. 1880.

This immense work, commenced in 1873, has been prosecuted under the supervision of Dr. J. S. Billings, Surgeon U. S. A.; and will undoubtedly form, when finished, the most complete and valuable index of medical literature extant. This statement may safely be made, although Dr. Billings takes pains to disclaim that the work is a complete medical bibliography, but only a catalogue of a single collection. Nevertheless its principal use to the great majority of those who shall consult the work, will be that of a medical bibliography, applicable to all the publications available for consultation.

Some idea of the extent of this undertaking may be formed from the fact that the present volume includes 9,090 author-titles, representing 8,031 volumes and 6,398 pamphlets; also 9,000 subject-titles of separate books and pamphlets and 34,604 titles of articles in periodicals.

The great hopes based on this enterprise are now in a fair way of realization, and it is likely that the succeeding volumes will follow without long delay, since Congress is at last committed to its financial support. When finished, it will be a work of which the medical profession of the country may well be proud, and honestly so, since it has been due to their united influence that means have been supplied to meet its cost; at the same time it will be specially associated with the name of Dr. Billings, without whose industry and executive ability it would not have been undertaken, in our time at least.

S. S. H.

On the Bile, Jaundice and Bilious Diseases. By J. Wickham Legg, F. R. C. P., Lond., Asst. Phys. to St. Bartholomew's Hosp., and Lecturer on Path. Anat. in the Med. School. 8 vo., pp. 719. New York: D. Appleton & Co. 1880. [For sale by Armand Hawkins, 196½ Canal st.]

As the author aims to make his work a complete treatise upon the limited range of subjects indicated by its title, he devotes more than 200 pages to the chemistry and physiology of the bile, including the action of remedies on the secretion. On these topics it is not necessary to particularize here, as he draws his materials from the researches of numerous original workers. These pages will be found convenient for reference, not only for the matter contained, but for the ample bibliography displayed in the foot-notes. The latter feature is maintained through the volume, and is one of special value.

The remainder of the work is devoted to jaundice, or icterus, in its various forms. The most interesting of these to Southern readers are epidemic jaundice and icterus gravis, from their resemblance in some respects to yellow fever. The former prevails more in the winter season than in hot weather, but is a febrile affection, lasting two to four days, and followed by jaundice, ecchymoses and bleeding from the nose and gums. An epidemic which occurred at Civita Vecchia in January, 1859, was regarded by Fritsch as "a slight form of yellow fever." We cannot admit, however, that this disease could have been identical with the yellow fever of the coasts of the Gulf of Mexico.

Icterus gravis is defined as "an acute jaundice, accompanied by nervous symptoms, delirium, coma and convulsions, and by a hemorrhagic diathesis." He adds: * * * "as a disease due solely to the parenchymatous degeneration of all the glands and muscles, it becomes evident that it is a disease, not of the liver only, but of the whole body, * * * * * as much as small pox or typhoid is." Again: "There are not many varieties of *icterus gravis*; the two most important are the diseases called acute yellow atrophy of the liver, and phosphorus poisoning. Yellow fever is also a variety; and the "bilious typhoid" described by Griesinger, poisoning by antimony, arsenic, alcohol, and doubtless many other bodies, must follow under the same heading."

It is evident, therefore, that the author's nosology is based principally, if not solely, on symptoms, without regard to ætiology or the generally recognized principle of specificity in disease. In a later chapter he observes: "It is almost impossible to distinguish between the report of the examination after death of a case of yellow fever and of acute yellow atrophy. * * * * In all other particulars the anatomical changes are closely akin, the parenchimatous degeneration of the kidneys and heart, the acute catarrh of the stomach and intestines, the absence of glycogen from the liver, the hemorrhagic diathesis. The only point of the two diseases in which a difference can be made out is the state of spleen. This organ is, in yellow fever, rarely increased in size, while in acute yellow atrophy the enlargement is almost constant." With regard to albuminuria, however, he admits (p. 474) that the greater number of observers assert that it is wanting in acute yellow atrophy, while some have found it sparingly present. He also admits that the clinical history of the two are less alike than the pathological anatomy, though they exhibit four symptoms in common, viz: jaundice, the nervous derangements, the hemorrhagic tendency and diminution of urea. Among other symptoms not often seen in both diseases he names a high temperature before the appearance of jaundice; but this is a mistake, for it is always found in yellow fever before jaundice.

The important distinctive characteristics of yellow fever are overlooked by Mr. Legg, such as its epidemic tendency, its transportability by fomites and its arrest by frost, all of which indicate its specific nature.

With reference to so-called bilious disorders, he makes some sensible observations in one of the closing chapters. He says, "It will be seen that the symptoms of an acute bilious disorder are identical with those now commonly attributed to acute gastro-duodenal catarrh;" and he adds that the studies of Dr. Beaumont on the interesting case of Alexis St. Martin confirm this idea. He is not satisfied that the biliary secretion undergoes any change in these "bilious" complaints, and favors the discontinuance of the term "bilious" in this connection.

Of the work as a whole, we have only to say that it will be interesting and useful to those who are fond of monographs and have plenty of time to inform themselves fully on special subjects. The volume is printed in large, clear type, and is illustrated by a few good chromo-lithographs of the morbid appearances of the tongue and the liver. S. S. H.

On Slight Ailments: their Nature and Treatment. By Lionel S. Beale, M.B., F.R.S., Professor Principles and Practice of Medicine, King's College Hospital, London, etc. 12 mo. Pp. 353. Philadelphia: Presley Blakiston. 1880. [Sold by Armand Hawkins, 196½ Canal street, New Orleans.]

This volume is made up of some lectures delivered to the medical class in the early part of his course in the autumn of 1878, revised from short-hand notes, with the addition of some new matter. The division into lectures is not retained, but the reader will still observe the familiar colloquial style.

The following subjects, from the table of contents, illustrate the scope of the work: Of the Tongue in Health and in Slight Ailments; Appetite; Nausea; Thirst; Hunger; Indigestion—its Nature and Treatment; Of Constipation; Diarrhœa; Vertigo; Giddiness; Biliousness; Sick Headache, etc.

The terms "bilious" and "biliousness" are in general use by the laity, and much used by medical men, and we presume that very few have a definite idea of their meaning. There is a vague notion of hepatic derangement, from the bulk and presumed importance of the liver; but no opportunities for *post mortem* verification serve to throw light upon this conjecture. The author observes, "But as regards 'biliousness,' it seems to me that the yellow tinge of the conjunctiva, so commonly observed, the alteration in the color of the skin, the disturbed action of the sebaceous glands, the dryness of the skin, the sense of weight in the right side, the derangement of digestion, all point to the fatty and bile forming actions of the liver-cells as being mainly at fault." But the symptoms of a typical case of biliousness, as described by an intelligent subject of the complaint to the author, answer quite accurately to gastric dyspepsia. He had indigestion of

albuminous food, and such forms of discomfort as would naturally attend this kind of indigestion. In the work previously noticed, "biliousness" is supposed by Mr. Legge to be mainly a gastro-duodenal catarrh. We apprehend that, whenever any biliary derangement exists in so-called "biliousness," it is due to obstruction of the ductus communis choledochus, by extension of the catarrhal inflammation in that direction from the duodenum.

This work was originally addressed to medical students, and in its present shape it is best adapted to the wants of young practitioners. The class of ailments noticed here is commonly neglected in the lecture-rooms of our medical schools. Afterwards the young practitioner finds himself occasionally consulted for their relief, and he will be greatly at loss for suitable advice, unless he has had the benefit of private instruction in the office of a preceptor (now rather the exception than the rule), or of experience in the out-patient department of a hospital or dispensary. The style is rather diffuse, but those who will make use of the book generally find time the most abundant of their possessions. S. S. H.

A Practical Treatise on Tumors of the Mammary Gland; embracing their History, Pathology, Diagnosis and Treatment. By Samuel W. Gross, A. M., M. D., Surgeon to, and Lecturer on Clinical Surgery in the Jefferson Medical College Hospital, Philadelphia, etc., etc. 8 vo. pp. 245; illustrated by twenty-nine Engravings. New York: D. Appleton & Co. 1880.

The work whose title is here given in full, must from its nature and its intrinsic value as well as from the eminent position of its author,* command the attention of all progressive and enlightened surgeons and students of pathological anatomy. We cannot introduce it to our readers by means of an extended review, but must limit our notice to its general scope and the manner in which its subjects are handled.

The book is no compilation, but, as we are told in the preface, is based upon analyses of "sixty-five cases of cysts and

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* To prevent misconception we deem it proper to state that the author is the son of the renowned and venerable professor of surgery in the Jefferson Medical College, and has long been before the profession as an original investigator, writer and teacher.

nine hundred and two neoplasms, the nature of which has been confirmed by the microscope, and more than one-seventh of which are original." It will thus be clearly seen that the results of the immense labor here indicated are essentially the author's own, however much they may differ from or approximate the conclusions reached by others working in the same field. It is this individuality which must render the work attractive to original investigators, and to all who desire to become acquainted with the most recent developments of microscopical anatomy in connection with the various tumors met with in the mammary gland.

In common with nearly all modern morbid anatomists, Doctor Gross discards, for the most part, the common clinical classification of tumors, and endeavors to arrange them as nearly as possible, with reference to their histological elements. This is, of course, the only truly scientific plan, however impracticable its adoption may appear to clinical teachers of surgery.

The author is a profound believer in the local origin of carcinoma, as opposed to the now waning doctrine of the essentially constitutional nature of the disease. As a natural consequence he is convinced that it "may be permanently relieved by thorough operations practiced in the early stage of its evolution." Recurrence after removal he very rightly considers as by no means conclusive as to its constitutional origin, inasmuch as strictly benign tumors not unfrequently exhibit the same trait.

We append the author's brief summary of the clinical diagnostic differences between cancerous and non-cancerous tumors as they appear in the breast:

"The diagnosis of the non-carcinomatous neoplasms is based, therefore, upon their recurrence in one case out of every six and two-thirds before the age of twenty; their greatest frequency before the fortieth year; their multiplicity in one breast; their circumscribed, rounded, or ovoid and bossed outline; the firm consistence of the smaller and the unequal feel of the larger; their mobility in or on the breast and the adjacent tissues; their comparatively rapid growth and large volume; the almost normal appearance of the skin; the enlargement of the superficial veins when they are bulky; their tendency to ulcerate and fungate late in the disease; the absence of adhesions between the protrusion and the circular, and as it were punched out, margins of the ulcer; and, finally,

their exemption from a history of hereditary predisposition, from retraction of the nipple, and from enlargement of the associated lymphatic glands.

The points in favor of carcinoma are a history of heredity; non development before the twentieth year; greatest frequency after the fortieth year; irregular, knobby outline; uniformly densely hard consistence; immobility in the breast; relatively small volume and slow growth; retraction of the nipple; enlargement and induration of the lymphatic glands; invasion of the skin; fixation to the pectoral muscle or walls of the chest; limited ulceration, late in the disease, without any tendency to fungous protrusion; and the thickened, indurated, and everted edges of the ulcer."

As a scientific treatise the work will redound greatly to the credit and high standing of the author, and we trust that it will meet with general circulation.

Compend of Anatomy, for Use in the Dissecting Room and in Preparing for Examinations. By John B. Roberts, A. M., M. D., Lecturer on Anat. and on Op. Surg. in the Phila. School of Anat., in the Phila. Dental College, etc. Philadelphia: C. C. Roberts & Co. 1881.

This little volume, pocket size, is a careful "Compend of Anatomy," comprising most of the main facts of anatomy, gathered from the standard text books. The author has culled mainly from Gray, and arranged his material after the order of Gray's Anatomy, designing his work as a companion to this splendid text book. In his preface the author observes that, "it will be of use to those working in the dissecting room or preparing for examinations."

In the dissecting room it will prove of little use to fresh students. Such works only distract the minds of beginners, who really need only their text books. The beginner is too apt to estimate the task of learning the human anatomy by the size of the little book. Again, these small hand-books, containing only the naked fragments of anatomy, dry and uninteresting, without illustration, really tax the mind more than the fuller text of the standard books.

"Compends" are more useful to advanced students of anatomy, who wish a convenient book for review. To those who desire such a work, we recommend this little volume as the best of its kind yet brought to our notice. A. B. M.

Books and Pamphlets Received.

Minutes of the Twenty-fourth and Twenty-fifth Annual meetings of the State Medical Society of Kentucky, 1879–80.

Note on the Alkaloids of Cinchona. A paper read by Benjamin Lee, M. D., Ph. D., F. A. A. M.,of Philadelphia, before the Medical Society of the State of Pennsylvania, May 21st, 1880.

Quinquinia, a Natural Combination of the Alkaloids of Cinchona bark. Chas. T. White & Co., New York.

The Western Farmer of America. By Augustus Mongredien.

An Obstetric Case—Intra-Uterine Amputations. By Walter Coles, M. D., of Saint Louis.

The Rise of American Dermatology, being the President's Address before the Third Annual Meeting of the American Dermatological Association at New York, Aug. 26th, 1879. By Louis Duhring, M. D. Extracts from two transactions of the Association.

Hernia in Children. Based on a study of five hundred cases under personal observations. By Edward Swasey, M. D., of the Hospital for the Ruptured and Crippled, New York. Reprint from the American Journal of Obstetrics and Diseasas of Women and Children. July, 1880.

Some Practical Suggestion in the Treatment of Diphtheria. By R. J. Dunn, M. D., Savanah, Ga., Professor Practice of Medicine in Savanah Medical College, etc. Reprint from the Independent Practitioner. September, 1880.

Explanation of a Simple Method for the Diagnosis of Organic Valvular Diseases of the Heart. By F. Peyre Porcher, M. D., Professor of Materia Medica and Therapeutics, Medical College of the State of South Carolina, Associate Fellow of the College of Physicians of Philadelphia. Extract from the American Journal of Medical Sciences. October, 1880.

A Contribution to a Knowledge of Fracture of the Rim of the Acetabulum. Based on the reports of twenty-seven cases and experiments on the Cadaver. By Nicholas Senn, M. D., of Milwaukee.

Some Practical Observations made at the Department for the Disease of Children at the Central Dispensary, Washington, D. C. By George L. Magruder, A. M., M. D., Physician in charge.

Washington, D. C. Reprint from Virginia Medical Monthly. August, 1880.

On the use of Sulphur and its Compounds in Diseases of the Skin. By L. Duncan Bulkley, A. M., M. D., attending Physician for Skin and Venereal Diseases at the out-patient department of the New York Hospital; late Physician to the Skin Department, Demilt Dispensary, New York, etc., etc. Reprint from Archives of Dermatology.

On the Management of Infantile Eczema. By L. Duncan Bulkley, A. M., M. D., attending Physician for Skin and Venereal Diseases at the New York Hospital, out-patient's department, etc.

National Association for the Protection of the Insane and the Prevention of Insanity.

On the Relations of the Placenta to Postpartum Hæmorrhage. By Walter Coles, M. D., consulting Physician to St. Anna's Lying-in Asylum, St. Louis. Read before the St. Louis Medical Society, March 5, 1880. Reprint from the St. Louis Medical and Surgical Journal. March, 1880.

Perinephritis: Fifteen additional cases in children, completing a total of twenty-eight. Remarks on Diaynosis and Prognosis. By V. P. Gibney, M. D., of the Hospital for the Ruptured and Crippled, New York, etc., etc. Reprint from the Chicago Medical Journal and Examiner. June, 1880.

Lateral Lithotomy, with the successful removal of a Calculus and seven pieces of Necrosed Bone from the Bladder of an Indian Scout, nineteen months after the reception of a gun shot wound. By J. M. Banister, A. B., M. D., Assistant Sugeon, U. S. A., Post Surgeon, Fort Reno, Indian Territory.

Clinical Observation in the Radical Treatment of Fibroid Tumors of the Womb. By William Gordell, M. D. Extracts from the transactions of the Medical Society of the State of Pensylvania for 1880.

Treatment of Postpartum Hæmorrhage. By George J. Engelmann, M. D., Fellow of the American Gynecological Society; Fellow of the London Obstetrical Society, Corresponding Fellow of the Philadelphia Obstetrical Society, etc., etc. Reprint from the transactions of the Southern Illinois Medical Association, held at Cairo, Ill., January 22d, 1880.

Light in the Public Schools and School Life in Relation to Vision. A paper read before the Sanitary Convention at Detroit, January, 1880. By C. J. Lundy, M. D., Professor of Diseases of the Eye, Ear and Throat, in the Michigan College of Medicine, and Surgeon in charge of the Michigan Free Eye and Ear Infirmary.

Supplementary. Time of Conception and Duration of Pregnancy. By George J. Engelmann, M. D., St. Louis.

The Dangers incident to the simplest Uterine Manipulations and Operations. By George J. Engelmann, M. D., St. Louis. Reprint from transactions Missouri State Medical Society, 1880.

Contributions to Encephalic Anatomy. By E. C. Spitzka, M. D., New York.

Contributions to Nervous and Mental Pathology. By Edward C. Spitza, M. D.

Consumption and Tuberculosis. Notes on their treatment, by the Hypophosphites. By J. A. McArthur, M. D. (Harv), Fellow of the Massachusetts Medical Society, etc.

Seven Cases of Retroflexion of the Uterus with Peritoneal Adhesions of Fundus in the Hollow of the Sacrum, treated by forcible Separation of Adhesions. By Aug. F. Erich, M. D., Professor of Diseases of Women in the College of Physicians and Surgeons, Baltimore, Md., etc., etc. Reprint from the American Journal of Obstetrics and Diseases of Women and Children, October, 1880.

A Case of Combined Intrauterine and Abdominal Twin Pregnancy. The first child born naturally at eight months. The second delivered alive at term by Laparotomy. By H. P. C. Wilson, M. D., President of the Medical and Chirurgical Faculty of Maryland, and of the Baltimore Academy of Medicine; Gynecologist to St. Vincent's Hospital and the Union Protestant Infirmary, etc., etc. Reprint from the American Journal of Obstetrics and Diseases of Women and Children. Vol. XIII, No. IV, October, 1880.

Gastrotomy or Gastrostomy. By L. L. Staton, M. D., Tarborough, N. C. Extract from North Carolina Medical Journal. October, 1880.

If a Woman has ruptured her Uterus during Labor, what should be done in order to save her life? By Robert P. Harris, A. M., M. D., Ex-President of the Philadelphia Obstetrical Society, etc., Philadelphia, Pa. Reprint from the American Journal of Obstetrics and Diseases of Women and Children, October, 1880.

Meteorological Summary—October.
Station—New Orleans.

Date.	Daily Mean Barometer.	Daily Mean Temp'ture.	Daily Mean Humidity.	Prevailing Direction of Wind.	Daily Rain-fall.	General Items.
1	30.197	70 5	59.3	N. E.	.00	Highest Barometer, 24th, 30.441.
2	30.122	73.7	76.7	East.	.02	Lowest Barometer, 28th, 29.758.
3	30.053	75 2	78.7	S. E.	.18	Monthly Range of Barometer, 0.683.
4	29.966	74.0	79.0	North	.00	Highest Temperature, 84° on 13, 14, 15
5	29.999	68.5	81.7	North	.00	Lowest Temperature, 52° on 31st.
6	29.984	72.2	80.0	N. E.	.00	Greatest Daily Range of Temperature,
7	29.926	73.2	75.3	N. E.	.00	18°.
8	29 932	73.2	78.0	N. E.	.00	Least Daily Range of Temperature 5°
9	30.023	70.0	75.3	North	.00	—
10	30.031	70.5	93.3	North	.31	Mean of Maximum Temperatures, 74.0°
11	30.109	75.7	84.0	S. E.	*.00	Mean of Minimum Temp., 62.2°.
12	30.162	77.5	81.3	East.	.07	Mean Daily Range of Temp.,—
13	30.129	77 0	82.7	North	.00	Prevailing Direction of Wind. East.
14	30.104	76.2	77.3	East.	.00	Total Movement of Wind, 5,447 miles
15	29.994	76.7	77 3	South	00	Highest Velocity of Wind and Direc-
16	30.085	64.0	69.3	North	.25	tion, 19 miles, North.
17	30.293	61.5	41.3	North	.00	Number of Clear Days, 6.
18	30.382	59.7	46.3	N. E.	.00	Number of Fair Days, 12.
19	30·296	62.2	68.7	East.	.00	Number of Cloudy days on which no
20	30.178	65.2	71.3	N· E.	.00	Rain fell, 7.
21	30.080	66.2	74.7	N. E.	*.00	Number of Cloudy Days on which
22	30.096	63.7	62 3	North	.00	Rain fell, 6. Total number of days
23	30.253	59.7	54.3	N. E.	.00	on which rain fell, 10.
24	30.380	60.2	56.7	N. E.	.00	Dates of Lunar Halos,
25	30.260	63.2	68.7	East.	.00	
26	30.048	67.0	71.0	S. E.	*.00	
27	29.873	67.9	82.7	S. E.	.03	
28	29.796	63.5	89.0	N. E.	.95	
29	29.816	59.5	76.0	West.	*.00	
30	29.950	61.0	82.5	N. W.	.00	
31	30.120	58.2	76 7	N. W.	.00	
Sums	.....	....	....	.....	1.88	
Means	30.085	68.0	73.3	East.		

COMPARATIVE TEMPERATURE.

1871.....		1876.....	65°.56
1872.....		1877.....	76°.2
1873 .....68°.2		1878.....	70°.6
1874.....70°.43		1879.....	72°.4
1875..... 67°.3		1880.....	

COMPARATIVE PRECIPITATION

1871.....inches.		1876: .24	inches
1872..... "		1877: 9.15	"
1873: 1.89 "		1878: 5.07	"
1874: 0.00 "		1879: 1.36	"
1875: 2 09 "		1880:	"

* Too small to measure.

L. DUNNE,
Sergeant. Signal Corps, U. S. A.

Mortality in New Orleans from October 16th, 1880, to November 13th, 1880, inclusive.

Week Ending.	Yellow Fever.	Malarial Fever.	Consumption.	Small-pox.	Pneumonia.	Total Mortality.
October 23	0	12	11	0	5	104
October 30	0	10	21	0	7	115
November 6	0	15	18	0	3	121
November 13	0	7	23	0	4	123
Total....	0	44	73	0	19	463

NEW ORLEANS
MEDICAL AND SURGICAL JOURNAL.

JANUARY, 1881.

ORIGINAL COMMUNICATIONS.

The Diagnosis of Yellow Fever.

By GEO. M. STERNBERG, Surgeon U. S. A.

It is not my intention in this paper to attempt a thorough discussion of the questions relating to the differential diagnosis of yellow fever, but rather to reply in a general way to the criticisms which have been made upon my report to the National Board of Health, of my investigation of the local epidemic in Plaquemines parish, by those who differ from me in opinion as to the nature of this epidemic. In a letter published in the October number of the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL I answered briefly some of the points made by one of my critics. In the present paper, and in future, I shall avoid personal discussion, and shall endeavor to answer in a general way the arguments advanced either directly or inferentially by those who differ with me.

It is assumed by the non-professional public, and is apparently the opinion of not a few physicians, that yellow fever *always* presents such distinctive and well marked characters that the experienced physician should recognize it wherever and whenever he meets it, from a single clinical examination of the patient. The fact that my opinion, in the question of diagnosis recently under dispute, was based upon the clinical examination of several cases, considered in connection with the facts I was able to obtain relating to the origin and progress of the epidemic, while I freely admitted that I saw no single case in which I could make a positive diagnosis of yellow fever, has been brought against me by the newspapers, and even by

a medical critic, as a matter of reproach and as evidence of ignorance. Very naturally the picture of yellow fever remaining in the minds of non-professional persons, and of those physicians who first saw the disease during the great epidemic of 1878, is drawn from experience gained at that time. With such a vivid image before the mind of a rapidly extending pestilential disease, characterized by a hopeless or terrified expression of countenance, a bronzed skin, copious black-vomit, highly albuminous urine, and a characteristic odor given off from the body of the patient, it no doubt seems inexplicable that physicians who have once seen this disease should ever differ as to the diagnosis. And, given a case presenting all of these symptoms, it may be admitted that it does not require the critical acumen of a professional expert to diagnose yellow fever. The experienced nurse, or indeed any intelligent person who has once seen this marked assemblage of symptoms does not hesitate, during an epidemic, to give a name to the disease. Yet so prone are men to be blinded to the truth by their wishes, their interests, or their prejudices, that even these well marked and unmistakable cases often find their way into mortuary tables, especially at the outset of an epidemic, under other names, such as "conjestive fever," "pernicious fever," etc., etc.

But even during wide-spread and fatal epidemics, cases are seen in which there is no black vomit, no albuminous urine, no yellowness of the conjunctivæ or skin; and in which we have only the characteristic temperature curve, the slight frontal and lumbar pains, the gastric irritability with, perhaps, slight pain on pressure over the epigastrium, the debility and slow pulse during the second stage, and, above all, the fact that an epidemic of yellow fever is prevailing, upon which to found our diagnosis. Yet we do not hesitate to call these cases yellow fever. Now if we suppose these cases to be in the majority and the well marked fatal cases to be exceptional, would the disease be any the less yellow fever. This is exactly what I believe does sometimes occur, especially among Creole populations. That these mild cases do occur in every wide-spread epidemic is a matter of common experience; and that epidemics vary very much in character, especially as to disposi-

tion to extend and as to fatality is a matter of record. The argument has been advanced, that because, notwithstanding free communication, the form of fever, which prevailed in Plaquemines parish, did not extend beyond a limited area in that parish, therefore it was not yellow fever. Does not the history of the disease in this city, show, that a disposition to extend rapidly, is rather the exception than the rule. Has it not at times marched deliberately from house to house and from square to square. Did it not fail to extend in 1874, when twenty cases occurred in this city, in 1875 when ninety-five cases occurred between the 8th of August and the 25th of November in 1879 when cases occurred in the Stout family and in that of the distinguished Gen. Hood. It is unnecessary to multiply examples to show that this argument is entirely fallacious.

Again it is said that certain unprotected persons, engaged in gathering oranges, did not contract the fever. These persons were certainly exposed to emanations from the rice fields to as great an extent as the native population, and their exemption from sickness is, in my view, most likely due to the fact, which a knowledge of human nature leads me to infer, that they avoided the infected centres, where sickness and death acted as efficient sentinels to keep them at a respectful distance.

It has often happened in this city, as elsewhere, that yellow fever has prevailed in a certain square or district for a considerable time without extending to adjoining sections, and in this case unprotected persons are little liable to attack from simply passing through the streets in the infected area. The facts so far as known in regard to the Plaquemines fever have already been published and I shall not further discuss this local epidemic which, unfortunately, has not yet been studied in a thorough and systematic manner. I desire to say, however, before leaving this subject finally, that while I am convinced that I saw a number of cases of yellow fever, both on my first and my second visits to Point Michel, and that the deaths in and about the Giordano house as well as that of the Amoretti child were caused by yellow fever, yet I am by no means ready to vouch for the truth of the theory, advanced

by myself, that the disease first established itself in the practice of Dr. Westerman, directly opposite the Quarantine Station, about the 1st of August, and extended gradually from this point to the Giordano locality. This is, in my view, a sufficiently plausible hypothesis, but I have never claimed to have any positive proof of its truth and it rests mainly upon the assumption that these earlier cases of fever were of the same character as those I saw. An assumption based upon the statements of the local physicians, but which is weakened by the somewhat extended prevalence of dengue during the present season. As Giordano owns a lugger and is, I am informed, engaged in the fruit trade, it is not at all improbable that the introduction of the poison may have been more direct than I at first supposed, either from the Excelsior or some other infected vessel.

In support of my position that epidemics of yellow fever of a comparatively mild type may occur, I submit the following facts, drawn from the copious literature of the subject.

Dutrouleau gives the percentage of mortality from yellow fever at Martinique and Gaudeloupe for the years 1851 to 1857 inclusive, and we find the range to be from 12.9 per cent. in 1851 to 50 per cent. in 1856.

Bérenger-Feraud, whose scientific attainments and opportunities for the study of yellow fever, both in the French Antilles and on the coast of Africa, entitle his opinion to great weight, believes the fever known upon the islands of Gaudeloupe and Martinique as fièvre inflammatoire, etc., etc., to be nothing more nor less than a mild form of yellow fever.

He says "Certainly, for unprofessional persons, the fièvre inflammatoire is absolutely different from yellow fever, for the important reason, as they say, that in one recovery is the rule, almost absolute, whilst in the other, one-quarter, if not one-half of those attacked succumb. This reason may appear sufficient for those who are not familiar with the study of disease, but is it as convincing to us? No! And if we admit, for example, that there is between the two diseases a simple difference of intensity, the question of great mortality on the one hand, and extreme benignity on the other, no longer prevents the union of the two diseases in a single group."

Blair, who agrees with Feraud in recognizing three grades of yellow fever, says, in speaking of the protracted epidemic in British Guiana, which he has studied in so able a manner, "The hospital registers and case-books record three varieties of the epidemic disease, viz: *simplex, mitior* and *gravior*, and examples of these forms, or grades, are met with contemporaneously. It will be here necessary only to state that the mitior cases were distinguished by a tendency to resolve at the end of the second stage of the disease, and in it all the symptoms were less pestilential than those of the gravior form, and that the simplex cases terminated with the first stage or period of excitement, and rarely were followed by any contamination or dissolution of the fluids. *In this latter variety no death occurred.*

The percentage of mortality from yellow fever in the seaman's hospital at Demarara varied, according to this author, from 3.7 per cent. in 1844, to 42.7 per cent in 1839. There were two periods of maximum intensity divided by the year 1840. In the last six months of this year but nine deaths occurred out of 225 yellow fever cases admitted to the seaman's hospital. * * * The termination of the epidemic was preceded by the prevalence of the simplex form, denoting that the virus had become gradually weaker."

But it is not necessary to go abroad to establish the fact that the mortality from yellow fever differs greatly in different epidemics. The published statistics show that the same has been the case in this country. A single example of a mild epidemic will suffice. At Fernandina, Fla., an epidemic occurred in 1877, during which there were 478 cases with 75 deaths among the white, and 934 cases with 20 deaths among the colored population: being a mortality of a little more than 15 per cent. among the former and only a little over two per cent. among the latter.

It is not many years since we were confidently assured by distinguished physicians of the South that the negro never has yellow fever. This fallacy has been overturned by the logic of facts, and doubtless other dogmas which are still held with all the tenacity which belongs to the combined influences

of tradition and authority will yet fall to the ground before the same artillery. Among these is the assertion repeatedly made, both in this city and in Cuba, that creoles do not have yellow fever.

Now the difficulties of diagnosis arise, not in the well marked and fatal form of the disease, with which so many physicians made their first sad acquaintance in 1878, but in these milder epidemics, which, especially when they occur among a creole population, are so easily confounded with other endemic or epidemic febrile disorders. That these difficulties can be overcome, by any amount of professional acumen, upon a simple clinical inspection of one or two cases is, I think, disproved by the wide differences of opinion which constantly occur, in this this country as elsewhere were yellow fever prevails, among distinguished physicians equally entitled to our respect.

For me these difficulties are greatly increased and seem almost insurmountable, since I learn that the disease known as "dengue," which has prevailed in this city during the present summer, has, not infrequently, presented the symptoms of albuminous urine and black vomit. I have no personal knowledge of dengue and do not feel competent to discuss the differential diagnosis between two diseases in which the temperature curve, the tendency to relapse, the deliberate epidemic extension and, in general, the clinical features, are so similar that experienced physicians do not hesitate to say that certain of the cases which they diagnose as dengue this year would undoubtedly have been called yellow fever if they had occurred in 1878. It is admitted that many of these so-called cases of dengue have not presented the eruptions and the intense neuralgic pains which are usually described as characteristics of this disease.

This admission corresponds with that made by the French physicians of the Antilles, who are in every way our peers as scientific physicians and careful observers, in regard to their so-called *fièvre inflammatoire*, of which dengue is one of the synonymes. Now, whether this is the same "dengue" or "dandy" fever of which the English physicians have had much to say on account of its frequent epidemic prevalence in the East Indies, and which has no doubt visited our shores

from time to time; whether it is this disease modified by local conditions peculiar to countries subject to invasion by yellow fever: whether it is, as Feraud believes, a mild form of yellow fever; or whether it is an independent disease due to a specific poison, is a question which in the present unsettled condition of medical opinion and in the absence of carefully recorded clinical observations, it is apparently impossible to settle.

I leave, then, the question of the differential diagnosis between yellow fever and dengue to others, more competent to cope with the task; but I must insist that those who undertake this task, bear in mind, that the difficulty does not relate so much to the well marked cases of either disease, as it does to a method of distinguishing the milder form of yellow fever, unaccompanied by yellowness of the skin, and in which often a trace only of albumen makes its appearance in the urine during the second stage of the disease, from such cases of dengue as are said to have occurred this summer, in which there has been no eruption, no severe neuraligic pains, and in which the abundant presence of albumen in the urine and the ejection of "coffee-ground" vomit has made up a *tout ensemble* of symptoms, which have hitherto been supposed by many practitioners to justify a diagnosis of yellow fever.

As to the diagnosis betweenyellow fever and the malarial fevers, I feel that I may speak with more confidence as I have had a somewhat extended experience with both of these diseases. Here I think we may safely rely upon the diagnostic differences pointed out in the text-books by standard medical authorities. First, and most important, stands the continued fever. When we have a case of fever in the yellow fever zone and during the yellow fever season, which is shown, by the frequent use of the clinical thermometer during 48 hours, not to present any distinct evidence of periodical remission, but rather a uniform fall from the acme of temperature, reached soon after the invasion, we should have strong suspicion that the case will turn out to be yellow fever. If several such cases occur almost simultaneously upon a vessel or in a town exposed to the introduction of the yellow fever poison, and the absence of any eruption excludes the eruptive fevers, this suspicion becomes almost a certainty. If now we

find the urine to be albuminous in one or more of these cases, our diagnosis should be considered established with sufficient certainty to justify us in reporting the facts and recommending proper measures to prevent the extension of the disease. Twice the garrison of Fort Barrancas, Florida, was moved, by my recommendation, upon such evidence as this, and in both cases subsequent events justified the diagnosis.

Certain prolific writers tell us much about hemorrhagic malarial fevers, and we are furnished with comparative tables to enable us to make a differential diagnosis between these and yellow fever. I must confess that my own experience, and my studies, have led me to disbelieve in the occurrence of epidemics of hemorrhagic malarial fevers. That hemorrhages occasionally occur in these fevers is undoubtedly true, but that black-vomit and albuminous urine are not uncommon features, is a position which I believe will not bear criticism.

I have taken some pains to inquire among practitioners who have had ample experience in intensely malarial regions, and I find that their experience sustains this view. During the civil war it was my fortune to be stationed in this city during two summers in the position of Assistant to the Medical Director. My duties required me to visit the hospitals frequently, and I was in constant communication with the surgeons in charge of them. These hospitals were filled to overflowing and a large proportion of the inmates were victims of malarial poisoning in all its grades and forms, but I do not remember of hearing of any hemorrhagic malarial fever.

If we had had half a dozen cases of fever with hemorrhage from the stomach and albuminous urine, we would have been very much alarmed and would doubtless have made a diagnosis of yellow fever. So far as I have been able to learn the malarial fever, known as Chagres fever, does not present the symptoms referred to, nor, so far as I know is this the case in the miasmatic fevers of the coast of South America and of Africa. I think, therefore, we may still rely upon these symptoms when associated with a continued fever of a single paroxysm for establishing a diognosis between yellow fever and the malarial fevers, whatever may be the facts as regards "dengue."

Yellow Fever.

SUMMARY OF GENERAL CONCLUSIONS,*

From the Final Report of the Chairman of the Havana Yellow Fever Commission.
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1.

Requisites to Progress in the Knowledge and Control of Yellow Fever.

Progress in the knowledge and control of yellow fever will depend, not on some wonderful discovery by luck or genius, but, on the progress of science in microscopy, chemistry, and diagnostics, and, in the progress of civilization, especially in the habitats of yellow fever, in vital statistics and public hygiene.

From $20,000 to $50,000 annually expended on well directed and continuous research, in places where the disease continuously prevails, would now accomplish in a few years more than will be accomplished in many years by interrupted and spasmodic efforts, applied to occasional epidemics, and due to the temporary panic caused thereby; and, would eventually repay the United States hundreds, probably thousands of dollars for every dollar thus expended. A people properly enlightened would demand such an expenditure for the protection of their own health and lives, as far more important than similar laudable expenditures, which are now incurred for the protection from disease, solely to increase their wealth, of their agricultural products. (Introduction.)

2.

Commercial Importance of Cuba to the United States.

The United States purchases from Cuba five times more of its products, than the United States sells of its own products to Cuba; the United States is the chief purchaser of Cuban products, and is an indispensable market to Cuba. Temporary

* These conclusions are confined, closely if not absolutely, to the inquiries embraced in the official instructions of the United States National Board of Health. Their somewhat dogmatic presentation is due to the facts, that these conclusions are based on some 400 pages of details contained in the full report, and that a summary of general conclusions justifies dogmatic brevity.

suspension of intercourse, during the months of chief danger from infection, would tend to force the Cuban trade into the remaining months, rather than seriously to diminish this trade; and the chief injury to the United States would fall upon its shipping and sailors temporarily deprived of occupation. Present sanitary restrictions on this trade very certainly do not inflict upon the United States the great losses alleged and supposed to be inflicted. (Chap. I.)

3.

Sanitary Condition of the Principal Ports of Cuba.

The sanitary condition of the principal ports of Cuba is very unfavorable, as proved by these two facts: during recent years their annual deaths have ranged from 32 to 67 per 1000 population; and, in all of these ports, from which the facts could be obtained, the deaths exceed the births.

The death-rates remain unfavorable, even if all deaths by yellow fever be excluded, and at times when this disease fails to prevail; and, the death-rate of the colored population, which suffers little with yellow fever, habitually exceeds the death-rate of the whites, who suffer severely. Malaria, consumption and small-pox, each inflicts, on health and life in Cuba, as much, if not more injury than yellow fever inflicts. (Chap. II.)

4.

Causes of the Insanitary Condition of Havana, etc.

The chief causes of the insanitary condition of Havana, and of Cuban towns generally, are as follows: An equable, warm, damp climate, preëminently favorable to vegetable decomposition, to animal putrefaction and to the growth of living organisms: the proximity of swamps, or of stagnant pools, prolific breeders of swamp-poison: an inadequate supply of water, which for drinking purposes is often defective in quality, and for purposes of cleanliness, is always deficient in quantity: very inadequate drainage and sewerage, causing, among other insanitary evils, wide-spread sub-soil and house-wall moisture: a most disgusting privy system, and an insanitary construction of houses, and of streets whereby many ill-ventilated traps are

provided for the warm, damp, foul confined air, favorable to the growth of disease-poisons: polluted harbors, especially at Havana, constantly frequented by filthy ships: and, last but not least, an excessive density of population in certain urban localities, and generally, throughout Cuba, in the houses. By such causes, the pure air, indispensable to healthy life, is incessantly and grossly vitiated. (Chap. V.)

5.

Remedies for these Insanitary Conditions.

The insanitary condition of Havana, and of other Cuban towns, is not due to any mysterious exceptional cause, but to an exceptional intensity of usual causes. Hence, there are no remedies for this condition other than those which are well-known, and have proved successful wherever properly applied. Financial and other obstacles to the application of these remedies in Cuba are so unusually great, that no hope is entertained that these obstacles will be either suddenly or soon removed. (Chap. VI.)

6.

First Recorded Appearance of Yellow Fever.

The pure blooded American red indian annually proves at Vera Cruz his present susceptibility to yellow fever, hence there is no reason to disbelieve that the aborigines of San Domingo and other Antilles, were susceptible, but had, in 1492, acquired immunity from the disease by the same process, and to the same general extent now enjoyed by the white, black and yellow or red natives of habitually infected localities in Cuba and elsewhere. Why there should have been no printed records of yellow fever until after 1492, is easily explicable, but there are no good reasons for the belief that either the origin or the first appearance among mankind of this disease occurred at the above, or at any assignable date.

Yellow fever *may have* occurred in Havana, and other ports of Cuba, in 1648–1655, and in Santiago de Cuba in 1745–8, but, there are no authentic records *proving* that the disease made its first appearance and permanent lodgment in Havana, until

1761. It certainly did not prevail severely and habitually prior to 1761. However, there are records of not less than 222 invasions of 46 other localities than Cuba during 100 of the 268 years, 1494–1761; and, 44 of these invasions occurred in 12 different places in the United States, from 1693, when it apparently first appeared in the United States, at Boston, to 1762. (Chaps. III, X, XVII, XVIII.)

7.

The so-called Edemicity of Yellow Fever in Cuba.

Since 1761, yellow fever has prevailed, certainly in Havana, and probably in other places in Cuba, every year, and the dates of prevalence, recorded in our text-books, indicate no more than the years of severest prevalence. The disease prevails in Havana, and in some other places in Cuba, not only every year, but also every month in the year; records in 1837 indicate that at that date the monthly prevalence had become habitual in Havana; the statistics, solely of the military and civil hospitals, prove that during the 408 months, 1856–1879, there was only one single month free from an officially recorded case of yellow fever; and these with other facts, and the lack of any to the contrary, justify the conclusion that the monthly prevalence dates from, certainly as remote a period as, the early part of this century.

The degree of prevalence varies greatly in different localities. In a few towns of importance, the disease made its first appearance within the memory of residents still living; in some localities it prevails but little; and in others not at all.

No localities, adjacent to, and in frequent intercourse with Havana, or any other habitually infected place, were found absolutely exempt, as had been confidently reported, from yellow fever; but some such localities were found, which suffer comparatively little. Even certain wards of Havana enjoy this comparative exemption, and respecting these wards it was found, that the Vedado ward was apparently as healthy and as free from yellow fever as the ward of Jesus del Monte, although the former lies low on the sea-shore, while the latter is th most elevated ward in the city; and, that the reclaimed sec-

tion of the Colon ward is very sickly and much infected by yel low fever, as is also that worst of wards, Jesus Maria, although the former fronts the sea, while the latter fronts the bottom and foulest part of the harbor. (Chaps. III, V, XV, XVII.)

8.

Causes of the Prevalence of Yellow Fever in Havana and Cuba.

The appearance of yellow fever in Havana in 1761, and its subsequent annual prevalence, must have been due to causes which did not exist prior to 1761, and have since been constantly present. The only decisive change, which then occurred, and has since persisted, was a great and continuous increase in commerce and population; from which it resulted that the poison, having been successfully transplanted where it found climatic and other local conditions requisite for its propagation, was furnished uninterrupted annual supplies of susceptible persons to feed on, and means, both ample and unrestricted, to come in contact with such persons.

The varying prevalence of the disease in different localities was found to vary chiefly with the amount of intercourse with infected places, and with the number of immigrants, or other persons susceptible to the disease.

The comparative exemption, enjoyed by some localities adjacent to and in constant intercourse with infected centres, was found to be due chiefly to these five causes, viz: (1) a small number of susceptible inhabitants; (2) free exposure to the winds, thus securing better ventilation; (3) more spacious house lots with more unoccupied space between these, thus also securing better ventilation; (4) a sparse population; and, (5) better drainage.

In fine, wherever in Cuba there is a town, which has constant intercourse with an infected place, numerous susceptible inhabitants, little exposure to the winds, and houses—the most crowded together, densely inhabited and filthy, ill-ventilated and drained—there a town will be found wherein the prevalence of yellow fever is correspondingly well marked. (Chaps. III, V.)

9.

Remedies for the so-called Endemicity of Yellow Fever in Cuba.

The exceptional prevalence of yellow fever in Havana and Cuba depends on causes exceptional in quantity, but not in quality. The only remedies therefor are an exceptionally vigorous application of those found most useful elsewhere, especially these three, viz: (1) local sanitation; (2) removal of susceptible persons; and (3) quarantine,—for the disinfection of infected things, and for the isolation of infected persons. From quarantine nothing can be obtained except the prevention of the introduction, or the reintroduction of a disease which has been eradicated; even, if this were once accomplished, the efficient application of quarantine to any important commercial centre, located in or near the tropics and having many avenues of entrance, presents so many practical difficulties, that no more should be expected from it than a great diminution in the number of the risks of infection, and not the certain deliverance from all of these risks. (Chap. VI.)

10.

Protection of Vessels in Infected Harbors.

The poison of yellow fever is not located in the water of the sea, or of harbors. For, the risks of infection incurred by vessels increase with their proximity to, and decrease with their distance from an infected shore or vessel; if no intercourse be held therewith, the danger absolutely ceases at a very short distance, certainly within a few hundred feet from the focus of infection. Hence, the larger the harbor of an infected place, and the greater the distance at which vessels anchor from the shore and from each other, the less dangerous is the harbor. Among the harbors of all places habitually infected, the harbor of Havana is exceptionally dangerous, because exceptionally small; and the only means by which this harbor, irrespective of the infected shore, could be rendered as little dangerous as are other harbors, would be to deepen its shoal-places, and otherwise so enlarge it, that every vessel which entered therein could be anchored, and would be forced to anchor, at

safe distance from the shore, and from other vessels. Since those vessels, which now anchor in this harbor, as far as is practicable from the shore (and in this harbor it is impossible to anchor more than 1500 feet from the shore), rarely become infected, very much less frequently than those moored at wharves, it is concluded that the putrid emanations, from the water in this harbor, to which emanations special infective power has been attributed, have no such power, but that the true sources of danger are located on the land and on infected vessels.

For the protection of vessels in the harbors of infected places it is, then, extremely important that they should anchor at a safe distance from the shore, and from infected vessels; and if the distance be necessarily too little for safety, it is important that healthy vessels should be kept to the windward of infected foci. Vessels should be frequently and thoroughly cleansed, ventilated, and by every other possible means, disinfected. The introduction of fomites should be prohibited as far as may be practicable. Persons on board, especially those susceptible to the disease, should abstain from intercourse with the shore, and infected vessels; and those who are sick with yellow fever, or with suspected yellow fever, should be neither retained nor received on board; for, while yellow fever is not personally contagious, it is communicable, and, as long as the modes by which it is communicated remain undetermined, prudence demands that all possible modes shall be controlled.

Apart from the special danger attached to articles which, and to persons who, have been subjected to specially infected surroundings, those fomites are probably the most dangerous which are the most porous or which have the most interstices, wherein air is confined, and microscopic particles are lodged. The determination of what things are specially yellow fever fomites, and to what comparative extent, is most important to commerce, and deserves careful research. Since ballast is very porous and absorptive, it should be regarded as suspicious, and therefore treated as dangerous when it either has been procured at, or has been exposed to infected localities. The depots for ballasts at Havana (and especially the one among

these at Regla), and the depots at Matanzas and Cardeñas are very unfavorably located.

The various sanitary measures, indispensable for the protection of vessels, cannot be executed without efficient laws and efficient sanitary officers. Those laws which must be enforced on foreign soil, or on foreign vessels, cannot be efficiently executed without foreign consent; hence, an International Sanitary Code is necessary to confer on nations all powers requisite to protect each other from communicable diseases. (Chapters VII, IX.)

11.

Portability and Communicability of Yellow Fever.

Like typhoid fever and cholera, yellow fever is not inoculable and is not personally contagious as are small pox, measles, etc., but all three of these diseases are portable and communicable. However, the fact, that the modes by which typhoid fever and cholera may be communicated have been better determined in recent years than has yet been the case with yellow fever, causes the communicability of the last to be still as much doubted, as was formerly doubted the communicability of typhoid fever and of cholera.

The arrival of things and of persons from an infected place has not been proved to have immediately preceded the first appearance of yellow fever in all cases, nor its reappearance in many, doubtless in the majority of cases; but, this sequence has been conclusively proved in numerous cases, especially in instances of the first appearance of the disease. The disproportion between the unproved instances or negative evidence, and the proved instances or positive evidence, has decreased with an increase of the best methods, men, and opportunities to secure proofs; so that the instances successfully traced, especially in navies and armies, have now become very numerous. While only one conclusively proved instance of importation is required to establish the fact that yellow fever can be imported, yet, apart from this, the great number, and the progressive increase in the number of instances in which it has now been established, that outbreaks of yellow fever have im-

mediately followed, and have been otherwise closely connected with, the arrival of things and persons from infected places, justify the deduction,—"post hoc ergo propter hoc." Combining these facts, with the marked preference of the disease to routes of travel, and especially to places where ships, steamboats, and railroad-cars halt, the conclusion cannot be avoided, that, whatever may be its origin, whether it can or cannot originate spontaneously and locally, yellow fever is portable, can spread from a nucleus of infection, and therefore can be communicated.

Places, which are populous and have many avenues of entrance, furnish much less favorable opportunities to determine whether a disease, habitually prevalent in such places, can be imported, than are furnished by places, which are little populous, have but one or few avenues of entrance, and suffer with the disease very rarely and at distant intervals. Notwithstanding this fact, medical opinion in Cuba, based on experience there, now strongly preponderates in favor of the belief that yellow fever is a portable and a communicable disease. Personal intercourse, in 1879, with many of the most distinguished physicians in Cuba, encountered no one of these opposed to this belief, and assurance was given by these that *all* physicians of eminence in Cuba were advocates of this belief. Nevertheless, many of these physicians did believe that, although the disease could be imported, it was indigenous to or originated spontaneously in certain Cuban localities. Thus since some "indigenists" are at the same time "importationists," the total separation of the former from the latter fails to represent fully the numerical superiority of the importationists; however, no other classification is derivable from the official written reports to the U. S. Commission. From 19 of the 49 places specially reported, there were received from Boards of Health, medical officers, and consuls, 22 official reports, wherein an opinion is expressed whether yellow fever, at each one of these 19 places is "indigenous" or "imported." Of these 22 reports, 7 pronounce the disease indigenous, 10 pro-

nounce it imported, 4 consider it doubtful, and one from the Board of Health at the sea port, Bahia Honda, testifies that yellow fever does not exist there, hence is neither indigenous nor imported. Excluding this last report, there were of the 22 reports, 15 others from Boards of Health; and of these 7 pronounce the disease indigenous, 7 imported, and one doubtful. Further criticism of these reports discloses the fact, that, the places where yellow fever is most prevalent furnish more numerous reports of supposed indigenous origin, while the places where this disease least prevails furnish more numerous reports of supposed origin by importation. (Chapter VIII, and XXVI to LXXVI.)

12.

Disseminating Causes.

Ships, steamboats and railroad cars, are the chief disseminators of the poison of yellow fever, which is thereby disseminated with a facility apparently the same, whether against or with prevailing winds. The harbor of every infected place constantly and conclusively proves that winds fail to infect vessels even at a short distance from the shore, and other facts also demonstrate that the poison is distributed by the wind to distances so limited, that the "epidemic wave-theory" of yellow fever, provided an aërial wave is signified, becomes absurd.

Experience fails to teach, that those are in special danger who are exposed to winds prevailing from an infected focus quite near at hand; but, experience does teach, that confined air, that is, air undisturbed by winds, is most favorable to the poison—that those who live or sleep nearest the ground, where air is least disturbed by winds, are exposed to greatest danger, a danger which decreases with elevation—and that those engaged in ambulatory are more exposed than those engaged in sedentary occupations, thus showing the tendency of the poison to become localized in scattered foci, and not to be generally distributed by the winds, or to be diffused like a gas. (Chaps. VIII, IX, X.)

13.

Causes alleged, but not real, for either the Generation, or for specially the Propagation of the Poison of Yellow Fever.

Neither the sea shore, nor salt water, nor mixed salt and fresh water, originate or specially favor the growth of the poison of yellow fever. Sea ports at the mouths of rivers, and sea ports generally, have hitherto suffered most frequently, because of (1) their greater intercourse with infected places, (2) their frequentation by ships, the best carriers of the poison, and (3) their larger proportion of susceptible inhabitants—immigrants, visitors, sailors and soldiers. Yellow fever is neither generated nor propagated any better in Cuban localities on the sea-shore, than in those located inland; for, it does not prevail in the former more than in the latter, except when the sea-ports have a greater amount of intercourse with infected places, and a greater number of susceptible inhabitants. Yellow fever is not as is usually believed, exceptionally severe in the shipping of infected ports, except when the number of susceptible sailors is in exceptionally large proportion to the susceptible inhabitants on land; in Havana it is not sailors, but soldiers who suffer with exceptional severity, and chiefly because there is a larger number of the susceptible among them, than in any other class.

An inadequate supply of water certainly does not generate nor does it apparently favor the growth specially of the poison of yellow fever. There was no yellow fever in Havana during the time when the water supply was the worst; though this supply was improved in 1835, and again in 1878, no abatement of the disease followed; Vera Cruz, though abundantly supplied since 1867, suffers as before, and experience at New Orleans and other cities is to the same effect respecting *the introduction* of an ample supply of water, which however, it must be noted is rarely, if ever, adequately used.

Cemeteries within city limits certainly do not generate, and apparently do not favor the growth specially of the poison of yellow fever. Since 1871 all the dead of Havana have been

buried too distant from this city to exercise an influence on disease, yet, there has been no abatement in yellow fever.

There is convincing evidence that the preservation, and probably the growth of the poison of yellow fever are favored by places, containing warm, damp, foul confined air, such places as holds of ships, trunks, ill constructed barracks, and therefore probably privies and sinks; but, there is no such evidence that fæcal or urinary excretions, even from those infected, has any special influence on this disease.

There is no evidence justifying the belief that the peculiar geology or physical geography of places have any special influence on yellow fever. The influence of the latitude of places is due to temperature; and, the favorable influence of altitude above the sea is due to diminished temperature, to the better exposure to winds, and to the habitually sparse population and restricted intercourse of mountain localities. The favorable influence of altitude has been much exaggerated, since yellow fever has certainly twice visited Newcastle Jamaica, 4200 feet above the sea, and is alleged to have visited not less than five places in the Peruvian Andes, over 10,000 feet high,—one of these attaining an altitude of 14,000 feet. Naturally, the altitude attainable would decrease from the equator, that is with decrease of temperature. (Chapters III, IV, X, XII, XIII.)

14.

Causes, which do not Generate, but do, either certainly or probably favor the Growth of the Poison of Yellow Fever.

Climate has a decisive influence on yellow fever, but, not even the climate of places where the disease most prevails can generate the poison, as is illustrated by the facts, among many others, that Havana escaped until 1761, and that the disease fails, to this day, to occur at places within a few miles of, and therefore possessing the same climate as, the chief habitats of the disease. While climate has a decisive influence on the propagation of the poison, yet no proofs have ever been presented, that the wind from any particular quarter, that pressure of air, electricity, magnetism, or ozone have anything special to do with this influence. Only one climatic factor,

temperature, is certainly, and only one other, humidity, is probably indispensable to the growth of this poison; and, there is little reason to believe that there is ever in any part of the yellow fever region, a lack of as much moisture as the poison probably does require.

Although a temperature above the freezing point is indispensable to the growth of the poison, yet, the degree, and duration of the heat requisite, vary widely within certain limits, which are frequently misapprehended, as shown by the following facts. Though cases of yellow fever have been present, yet the disease has frequently failed to spread in the very habitats of the disease, not only when the heat was unusually great and prolonged, but also when the humidity was abundant, when numerous susceptible persons were present, and when the insanitary evils were as unfavorable as usual; hence, one or more other conditions are necessary to the growth of the poison besides unusual heat, even when conjoined with the presence of humidity, susceptible persons, and insanitary evils. Again, frost does not occur in Cuba, yet yellow fever habitually declines in September and October, at the very time when the number of susceptible inhabitants habitually increases, and when both humidity and insanitary evils remain unchanged; hence the usual decline is not due to frost, nor to the absence of any conditions known to be requisite. Farther, while yellow fever does habitually decline in September and October, none the less, there has not infrequently occurred in Cuba a recrudescence in the winter, and, in more northern places, a prevalence of the disease during months colder than Cuban winters ever are; hence, the usual decline cannot be attributed to lack of that amount of heat which is indispensable to the growth of the poison. These facts seem inexplicable except by the hypothesis, that the poison of yellow fever has, as most living organisms have, a limited period of each year for reproduction, but that, when subjected to unknown exceptional conditions, the poison may produce a double crop, as also occurs with some organisms. Within, as without the tropics, the poison manifests an annual tendency to become dormant, and an occasional tendency, even in summer and under appa

rently favorable conditions, to die out, as occurred in Cuba in 1866,—thus, annually presenting favorable opportunities to control it, and encouraging the hope that it might be eradicated from even its tropical strongholds.

Whether any special combination or particular recurrence, (other than that just stated) of climatic factors influence yellow fever is not now known, nor likely to be known, until farther progress has been made in science and civilization; for, little hope is felt, that the study of meteorology in connection with yellow fever will add anything to present knowledge, until accurate records are kept, not only of all cases, as well as deaths, but also of all distributing influences, other than climate, such as the daily varying number of the susceptible who may be exposed.

All, except two, of the insanitary evils, elsewhere detailed as the causes of the insanitary condition of Havana, existed there in equal, probably in greater degree, long prior to the appearance and continual prevalence of yellow fever; hence these insanitary evils, including all varieties of decomposition, putrefaction, defective ventilation and filth, combined with favorable climatic influences, cannot generate yellow fever. The two evils above excepted, because these have increased, are density of population and therewith a continuous increase in the number of susceptible inhabitants, but, dense aggregations of susceptible persons, subjected to all the previous insanitary evils, have occurred repeatedly in the American, and constantly in the Asiatic tropics, without generating yellow fever; hence, all of these conditions when combined, account for the origin of the poison no better, than they would account for the origin of the house-wall moulds, of the maggots, and of the house-flies which have, like yellow fever, also increased in Havana. However, it is not doubted, that susceptible persons are indispensable for the growth of the poison, and their close aggregation is admitted by all to be a favoring condition,—a significant fact, since density of population is favorable specially to communicable diseases.

While no condition, and no combination of conditions which have been cited account for the origin of yellow fever, neither

are there any ever suggested by man's imagination which do account for it any better than his imagination once preposterously accounted for the origin of numerous vegetables and animals, as due to a spontaneous power inherent in special local conditions. Proof that yellow fever has been transplanted in many instances justifies the belief, with our present knowledge of communicable disease poisons, that it has been transplanted in all instances of its first appearance; and, if the absolutely first origin of this poison be conceded, as with living organisms, to have once occurred, there remains no more difficulty in accounting for its accidental transplantations, its propagation, and its variable crops, than in accounting for these same things respecting numerous vegetables and animals. Hence, it is concluded that the origin of yellow fever is no more within reach of scientific research than is the origin of living organisms, and that the true field for research, designed to control the poison, is to determine the conditions requisite for its propagation.

Respecting these conditions, it is known that heat, humidity, susceptible persons, density of population, confined air or calm sultry weather, defective ventilation, inadequate drainage, and filth with all this implies.— conditions, all of which are variable,—are among those which are either necessary or favorable to the growth of the poison, and that there are other unknown conditions which are indispensable. These indispensable unknown conditions may be of such nature as, the uniform heat continued during a definite period of time necessary to hatch an egg, or as subjection of the poison for a certain time to darkness, to an excess of carbonic acid, or to such other like conditions as are now known to be indispensable to the growth of some microscopic organisms.

The failures, under apparently most favorable conditions, to transplant the poison constantly recur, and are more frequent than are even the numerous successful transplantations, thereby proving that a combination of all required conditions occurs comparatively rarely, and thereby, justifying again the hope, that yellow fever will, with increasing knowledge event-

ually become a readily controllable disease. (Chapters IV, V, VIII, XI.)

15.

Origin and Nature of the Poison of Yellow Fever.

This poison spreads, multiplies, and is endowed with the function of reproduction which is limited to living organisms. Microscopical evidence that this poison is a living organism is no more necessary to such a conclusion, than microscopical or chemical evidence is necessary to prove the conclusion that this poison is an inorganic, a dead organic, a miasmatic, or other mysterious something. Since each theory lacks conclusive proof, the one which the better explains all the phenomena of the disease is the more rational. The former has become the more rational, because, among other reasons, many microscopic living organisms have been discovered, which cause specific spreading diseases in vegetables and animals, while neither microscopy nor chemistry have yet demonstrated the supposed inorganic dead poisons which cause any such diseases; and, because well known microscopic living organisms are endowed with characteristics, which are most analogous to and best explain the characteristics of the poisons of yellow fever, and of other specific spreading diseases.

The belief that the poison of yellow fever is an inorganic or a dead organic something, and therefore that it originates spontaneously and locally is due to two causes, viz: the absence in numerous instances of proof of importation, and disbelief in the duration of the dormant vitality of the poison. Absence of proof is mere negative evidence, and instances thereof however numerous, do not counterbalance one single instance of positive evidence, which alone suffices to prove that the poison can be imported, and a sufficient number of such instances have now been secured to justify the inference that the poison has been imported in every instance when it did not pre-exist. Whether the poison, in cases where certainly not imported,—and certainly on such a subject is most difficult to acquire,—did or did not pre-exist, depends on

whether it was ever before present, and if so, what was the possible duration of its dormant vitality. While research, and careful reports of all cases, respecting the possible duration of the dormant vitality of yellow fever poison are much needed, yet there is good evidence that it may lie dormant at least two years. In any case, the power of specific spreading disease-poisons, yellow fever included, to resist the destructive influence of time, and of other deteriorating agents, and to lie dormant, without manifesting their presence until conditions arise favorable to their action and growth, is well established; while the power of any of these poisons to develop spontaneously remains unproved. Advancing knowledge has constantly tended so to strengthen faith in the one power, which has been conclusively proved, and so to destroy faith in the other, which finds at the present day less reason for acceptance than ever before,—that credence is now justifiable in the least credible instances of dormant vitality in preference to credence in the most plausible instances of supposed spontaneous origin.

16.

Origin of Yellow Fever on Ships.

The doctrine of the spontaneous origin of yellow fever on ships, is theoretically incredible, and is practically destitute of proof derivable from a solitary instance of the infection of any vessel, which had not previously communicated directly or indirectly, with some infected place, thing or person. This doctrine is due to ignorance respecting the duration of the dormant vitality of the yellow fever poison, and to hasty credence in the negative evidence that an infected vessel had not previously communicated with any source of infection. In the vast majority of cases, this negative evidence has been to the effect, that the infected vessel had visited some usual habitat of the poison, which, however was not present, as is alleged, at the time when visited by the vessel. Experience, in any place habitually infected by yellow fever, abundantly teaches that easy credence should never be given evidence to the effect that the disease has ceased to prevail, or has failed to reappear

at the usual season, unless this evidence is derived from the highest sanitary officer in the place; and, that even this evidence should not be trusted, unless it be known that said officer is not only trustworthy and competent, but also is provided with ample opportunities to know whereof he testifies.

In fine, although yellow fever never has originated and never will originate on ships, yet, this disease continued throughout the long period of time during which ships were the chief vehicles of transportation from infected places, to be, in a certain sense, a "sea port," "nautical" and "oceanic" disease; but, with the invention of steamboats, it, in the same sense became a disease of towns on navigable streams and, with the invention of railroads, it became a disease of inland railroad depots. Hence, though ships, for obvious reasons, continue to be the best carriers of yellow fever, this is no more a "sea port" or "oceanic" disease than it is a fluvial, riparian or inland disease, and no more a ship disease, than it is a steamboat or a railroad disease.

A careful study of the fomites and of the modes by which vessels become infected is calculated to advance existing knowledge on the methods by which infection occurs, more than a like study prosecuted elswhere than on vessels. (Chapter IX.)

17.

Acquisition of Immunity from Yellow Fever, or Acclimatization so-called.

The better comprehension of this subject is indispensable to progress in our knowledge of yellow fever, and especially of its diagnosis, a subject of primary importance to the sanitarian.

Natives of Cuba, as of all other countries, of every age, sex, and race are liable to yellow fever, and only those who have had the disease, or have constantly resided in infected localities enjoy immunity. The fact that the natives of any place never apparently suffer at all, while susceptible foreigners usually do, is conclusive evidence that the poison is present in said place, that the natives have been habitually snbjected

thereto, and have, because of the habitual presence of the poison, acquired immunity through some process or other.

While physiological functions can become accommodated to different seasons and climates,—to this extent acclimatizing vegetables, animals and man,—yet, there is no good reason to believe that any climate can render any living thing insusceptible to any poison. There is even less reason to believe that the direct influence of climate can render man insusceptible to the poison of yellow fever, hence, to designate his acquisition of immunity from this disease "*acclimatization*" is a gross abuse of language.

It has been urged that the immunity enjoyed by the natives of habitually infected places might be due to their better developed excretory powers; but it is impossible to accept this explanation, when it is considered that the adult natives, of non-infected localities within a few miles of infected localities, do not, while adult natives of the latter do enjoy immunity; and, that foreign born children do not, while all native born do, as is alleged, enjoy immunity. It is incredible that a comparison between these two classes would demonstrate a difference of excretory function, and it is also incredible that every native child should be able to take a dose of yellow fever poison fatal to a foreign adult, and, because of superior excretory power, experience, as is alleged, no effects whatever.

It is not known that the law of the "survival of the fittest" may not be applicable to yellow fever, possibly to the extent that parents who were never, or perhaps very little, susceptible, might beget descendants who, in the first or succeeding generations, would be insusceptible. But, there is good evidence that parents do not, after they have had yellow fever, beget, outside of habitually infected places, children who are insusceptible to the poison; and it is certain that foreign born parents who have had yellow fever do not, for this cause, beget native born children, who, in the very first generation are insusceptible to, and endowed, as it is alleged, with immunity from this disease. In fine, the wholesale immunity which, it is alleged, is enjoyed by all children born in habitually infected places cannot be due to inheritance.

Administration of, or habituation to any known poison, other than yellow fever, does not destroy susceptibility to the latter.

Habituation to the poison of yellow fever itself cannot be the process by which the native children of infected places acquire —without any disturbance, as is alleged, of health—their apparent insusceptibility. For, in such case, it would be necessary to admit of this poison that which is not true of any other known poison, and is otherwise incredible, that even a brief habituation confers generally a permanent insusceptibility, and that doses violently poisonous to most foreign born adults produce no ill effects whatever on any native born children.

One attack of a non-recurring disease is the only general process, admitted for all non-recurring diseases except yellow fever, by which future immunity can be acquired; and, among various supposed processes, this remains the only one, which is undisputed for yellow fever. Although it is denied that this process applies to children born in infected places, none the less it is certainly true as to New Orleans, and therefore probably true as to all other places, that whenever yellow fever kills the adults, then, during the very same time, the children, under 10 years of age, die in unusual number. Hence, this excessive mortality of children must be due, either to the poison of yellow fever, or to some one or more other disease-poisons, which are invariably associated with the yellow fever poison; and since no such poisons are known or even suspected to exist, the conclusion is justifiable, that the same poison which kills the adults also kills the children. It therefore follows, that the insusceptibility to yellow fever, alleged to be enjoyed by the natives of habitually infected localities is apparent, not real, and that their immunity, en masse, is acquired by the same process that the foreign-born acquire it, which is also the same process by which immunity is acquired in every other non-recurring disease.

The vital statistics of New Orleans prove that children under 2 years, and especially those under 1 year, are, as in several other zymotic diseases, comparatively little liable to yellow fever, while those from 2 to 5 years and older, suffer severely.

Experience in every yellow fever habitat has proved that

some adults and many children suffer, especially during epidemics, with febrile attacks which protect from yellow fever, and yet are accompanied by symptoms too mild and vague to justify, in our present ignorance, a satisfactory diagnosis. The special study of such cases is indispensable to the removal of our unanimously admitted deficiencies in the diagnosis of yellow fever. (Chapt. X.)

18.

Yellow or Malarial Fever.

The old theory, still entertained by a few, that yellow fever was due to an intensified malarial poison is now so untenable, that those who are well informed do not require even this brief allusion to guard them from the misapprehension, that silence on this subject implies assent to such a theory.

That both poisons are living organisms, which require for their growth some conditions which are the same, is most probable; but, the characteristics which prove them to be two distinct specific poisons are fully as well marked, as are those which distinguish typhoid from typhus fever.

CORRESPONDENCE.

BALTIMORE, NOV. 20th, 1880.

It is about two months since the medical "season," as it may be termed, opened here. All the doctors who have been away at the sea-side, the springs, or abroad, have returned and settled down to work; the medical colleges are in full blast, and the societies are active and doing good work.

There are two medical colleges here—the College of Physicians and Surgeons, and the University of Maryland. The former has about 325 students and the latter about 150. The instructions at both institutions are pretty thorough; both recommend the three years' term, and it is to be hoped that

this will soon be made obligatory. It is whispered among those in the confidence of the faculty, that the College of Physicians and Surgeons will next year make a decided step forward. The friendly rivalry and honorable competition between the two schools cannot fail to have an elevating effect on the future character of medical education in this section.

A gratifying evidence of life and progress on the part of the profession here is manifested by the increased number of writers among its members. Thus, in the last number of the *American Journal of Obstetrics*, there were two Baltimore names; in the last number of the *American Journal of Medical Sciences*, one, while there are always one or two original papers by Baltimoreans in each number of the *Maryland Medical Journal*, and the *Virginia Medical Monthly*. It is true that some of these contributions add nothing to our general fund of knowledge, but it is nevertheless a gratifying evidence of activity.

The sesqui-centennial of the foundation of the city, of course, brought out the doctors, who held a meeting and heard papers read on the surgeons and physicians of Baltimore, the history of the medical press, the medical societies, and on medical education in our midst. The several essayists showed that the Monumental City had a right to hold up her head, at least to the level of her sister municipalities, so far as the doings of her medical men were concerned. The history of medical journalism was, however, of particular interest to me, and I desire to point to the essay of Dr. Ashby as a model for all such disquisitions. It was not only a list of the numerous births and untimely deaths which have occurred in Baltimore medical journalism, but an attempt to trace the causes to which the several failures were due. It is to be hoped that the venture which Dr. Ashby now directs—the *Maryland Medical Journal*—may not meet the same melancholy fate which has overtaken its predecessors.

But enough of such glittering generalities. Some very interesting cases have occurred at the hospitals, and a number of exceedingly valuable papers read before the medical societies.

At the City Hospital, Dr. O. J. Coskery excised a tumor, adeno-fibro-enchondromatous in structure, which was attached

to the neck just below the right lower jaw and resting upon the clavicle. The tumor was encapsulated, but the operation was attended by a great deal of hemorrhage. Several hours after the operation, secondary hemorrhage occurred, but was soon arrested. The man left the hospital on the sixteenth day after the operation, well. The tumor weighed 3 pounds 10 ounces.

At the dermatological clinic of the University hospital Dr. J. E. Atkinson exhibited a patient with leprosy, at a recent lecture. The case is still in the earlier stages, the macular lesions predominating. These cases are very rare here, this one being only the fourth of which there is any record, and the first in whom the disease occurred without the patient having been out of the State. The lecture was a very excellent summary of what is known about the disease at the present day.

At the *Medical and Surgical Society* several very excellent papers have been read; one by Dr. A. F. Erich on post-partum hemorrhage. This was the most thorough and systematic review of the causes and treatment of this alarming accident that I have seen anywhere. Particular stress was laid on the fact that dangerous and even fatal hemorrhage may occur after parturition, although the uterus be well contracted. This, it appears to me is an important point, and one too frequently overlooked by the practitioner who trusts too much to the aphorisms of the text-books. An effective method of treatment of hemorrhage from atony of the uterus is, according to Dr. Erich, the use of the battery. He uses a small *Gaiffe* battery, which is so compact that it can be easily carried in the pocket or obstetrical satchel. The electrodes are long and flexible; one is introduced into the uterus until it touches the fundus and the other pressed against the os. Powerful contractions are immediately produced, but pain is avoided by applying the electrodes internally, where there are few sensitive fibres. The battery is claimed to be effective in all cases of atony of the uterus, except where there is fatty degeneration of the muscular tissue.

At a subsequent meeting of the same society, Dr. C. F. Bevan made a valuable contribution to the statistics of internal urethrotomy by Otis' method. Two hundred and twenty-five

strictures, occurring in one hundred patients, were analyzed, with the following results, agreeing in the main with those of Prof. Otis:

Seventy-five to eighty per cent. of the strictures occurred in the anterior 4½ inches of the urethra; the relative proportion between the calibre of the urethra and the circumference of the flaccid penis, may almost be considered as definitely established; the occurrence of strictures of large calibre, and the importance of dividing them; the possibility of radical cure of stricture by dilating urethrotomy; the comparative safety of the operation; the superiority of Otis' operation over all others devised for the relief of strictures of the urethra.

In the discussion which followed the reading of the paper, there was, with one exception, general agreement with the conclusions of Dr. Bevan.

At the Clinical Society, recently, Dr. Coskery read a report of three cases of probable rupture of the kidney from violence. The only prominent symptom justifying this risky diagnosis was the persistent presence of blood in the urine for two to three days, and evidence of the influence of direct violence over the renal region. In none of the cases, except the last, was an autopsy obtained, and in this case not until about three months after the accident, when a large abscess was found under the sub-peritoneal fascia, beneath and around the left kidney. All three of the patients recovered from the immediate effects of the accident.

Diphtheria, typhoid fever and scarlatina are very prevalent in this city at present, diphtheria being especially malignant. A promising method of treatment of typhoid is that by means of carbolic acid in the dose of one grain in glycerine every two hours. It reduces the temperature more promptly than quinine; is much less expensive; destroys the offensiveness of the discharges and checks the diarrhœa. Dr. J. W. Chambers is now experimenting with this remedy, and expresses himself enthusiastically in its favor. He will doubtless soon publish his observations.

CORSAIR.

Current Medical Literature.

CHLORATE OF POTASH IN THE HÆMORRHAGIC DIATHESIS.

By ALEXANDER HARKIN, M.D.,

Membre Associé Etranger de la Societé Française D'Hygiène, Paris.

The therapeutic value of chlorate of potash is, to a certain extent, recognized by the profession. This medicine has not, however, in my mind, received the attention to which it is properly entitled. Its sphere of usefulness has a much wider range than has been accorded to it, for there is not, in the catalogue of the *Pharmacopœia*, according to my experience, a single remedy so many-sided, whether given alone or in combination, as this crystalline body, the product of the laboratory.

At its introduction, this salt was principally recommended as an antidote to scurvy. It is now prescribed for throat affections, for scarlatina, for low fevers, for blood-poisoning, etc. I am convinced, however, that it will yet be recognized as a most potent agent in the treatment and cure of all maladies dependent on suboxidation, on defective nutrition, secretion, excretion, aëration, and molecular metamorphoses. Nor need it be considered strange that important results should follow its administration, when we remember that the elements of which it is mainly composed, viz: oxygen and potassium, are indispensable to the genesis of healthy arterial blood, and to the recuperation of its nutritive powers, when, after making the circuit of the system, it returns to the heart as venous blood, of darkened colour and impaired coagulability.

By the agency of the first-named, chiefly through the organs of respiration, the blood is chemically changed, and its vitality renewed by the metamorphosis of the corpuscles. Oxygen is, as we all know, required for other important purposes; notably for the conversion of the phosphorus and sulphur which are found in the protein compounds, into phosphoric and sulphuric acids, and their subsequent combination with bases. The other elementary substance, potassium, also operates in the circulation as an oxidizing agent; for, according to Bence Jones, "alkalies furnish, out and in the body, the most marked evidence of assisting in oxidizing actions." This alkali, too, appears to subserve another important purpose, as, according to Franz Simon, "the basic salts of potash and soda in the blood serve for the purpose of combining with the lactic, fatty, uric, and probably carbonic acids that are continually secreted during metamorphosis. (*Vide* Simon's *Chemistry*, vol. I, page 152.)

To the general use of the potato, which contains an abundance of potash, combined with a vegetable acid, may fairly be

attributed the rarity of scorbutus in modern times. To its absence as an article of food during periods of scarcity and famine, and the substitution of a bread and tea or rice diet, I have credited many cases of purpura and scurvy which have come before me. The late Dr. Baly has stated that scurvy was most prevalent in prisons where no potatoes were used. Dr. Garrod, in 1848, demonstrated that scorbutic blood was deficient in potash; and, more recently, Dr. Dickinson, in the pages of the *British Medical Journal*, has attributed, with apparent probability, the existence of lardaceous disease to a deficiency of potash in the white corpuscles. The importance of those elements, considered singly, will not be questioned. The consideration the narises: In what manner do those agents, combined as chlorate of potash, act upon the system? This can, in the present state of our knowledge, only be guessed at; but, judging from analogy, and from the results of observation, it may be surmised that, after the reception of a solution of the salt in the stomach, one portion, obeying the law that governs the action of the nitrate and iodide of potassium, is immediately carried out of the system by the kidneys, and may be detected, unchanged, in the urine. Another part, borrowing the language of Bence Jones, as applied to a soluble salt of iron, "diffuses into the liquor sanguinis, into every texture, into the blood-globules and white corpuscles, making a greater formation of hæmato-crystalline, and thereby promoting that combination with protagon, on which the formation of new blood-globules depends." And furhter: "By dialysis, all crystalloid medicines act as directly on the textures as on the blood; they act according to their chemical power when they enter the textures, and according to the chemical and physical properties of which the different textures are composed." The remainder is supposed to part with three equivalents of oxygen in the blood, leaving, as a residuum, chloride of potassium, which is found in the urine as well as in the blood, of which it is a normal constituent. The probability of the theory of direct absorption of these equivalents of oxygen is strengthened by observation, which shows that the constitutional changes induced by the persevering use of chlorate of potash are similar to those ascribed by Beddoes, Hill, Thornton, Birch, and other writers, to the direct inhalation of oxygen gas, viz: an improvement in color, an increase of vital and nervous energy and physical power, and the more healthful performance of all the nutritive and secretory functions of animal life.

It is, however, with chlorate of potash as a hæmostatic remedy that we are at present concerned; and it shall be my endeavor to demonstrate that, in its intelligent use, will be found a definite remedy for a specific diathesis, thus fulfilling within its own limits the prediction of John Simon, "that the results of empirical and popular observation will be transcended and eclipsed by the positive results of rational pathology;

that diseases will presently yield to philosophical investigation what they have refused to blundering quackery; and that, within the lifetime of many here, there will be a specific treatment of each diathesis, founded on an exact knowledge of the physiological laws of its manifestation." (*General Pathology*, p. 15.)

When we inquire what is the condition of the blood in the hæmorrhagic diathesis, we find that it coagulates with difficulty, that it has a soft clot, that it is not buffed, that it shows a diminished proportion of fibrine; and that, along with this depraved state of the blood, there is a corresponding abnormal delicacy of structure in the capillaries and minute vessels, which are easily torn, and are wanting in contractile power and tonicity.

In this condition, the slightest cut or scratch may lead to excessive hæmorrhage; a trifling contusion to extensive extravasation under the skin. For this dyscrasia, an antidote is needed that shall increase the fibrin of the blood, add to its plasticity and chemico-vital constituents, and that shall also tend to restore the contractile power of the capillaries and smaller vessels. That chlorate of potash, whether alone or in combination with a soluble salt of iron, is possessed of these properties, and has the power of controlling the various manifestations of the hæmorrhagic diathesis of the human system, an experience extending over more than twenty years has thoroughly convinced me. To detail at length the evidence upon which this conviction is founded, is forbidden by the space at my disposal. It shall be my duty, however, to report some examples of the salutary influence of this remedy in several of the most important lesions of this group; and my first illustration shall be drawn from a case of hæmorrhage from the bowels.

On December 18th, 1867, F. C., a constable, aged 27, of spare habit, residing at Boyne Bridge, Belfast, after returning at night from the music hall, found his boots full of blood, the source of which he traced to the rectum; next day, he had medical advice, and remained under the care of several experienced practitioners in hospital till February 14th following, without receiving any benefit. He then sent for me. On examination I could not discover any sign of fissure or hæmorrhoids, the blood seeming to flow from a congested state of the mucus membrane of the rectum. I prescribed rest, and a mixture composed of one ounce of chlorate of potash and twenty ounces of water; dose, one ounce three times daily. After the first day, he began to improve, and, on the third, every trace of the disease had disappeared. With the exception of a slight return after an interval of two years, he has been quite free ever since, one or two doses of the mixture having sufficed to relieve him. I have had occasion to see him officially very often since that time. He is now a strong, robust

man, and he attributes the change in his constitution to the use of the mixture, which he persevered with for a time.

Hæmophilia: Epistaxis.—A. B., aged 18, tall, of florid complexion, engaged in a large concern near Belfast, established for the manufacture of the textile fabrics for which that town is remarkable, suffered so much from a continual dropping of blood from the nose, caused by dust from the flax, that he feared he should have to relinquish the business. His family history is remarkable, his father having been subject to many and severe attacks of epistaxis, sometimes persisting, in despite of treatment, for a month at a time. Another member of the family suffered in the same way after the extraction of a tooth; a wound on the skin, as by shaving, giving rise to most troublesome bleeding. Having been asked by a friend, in the end of 1874, to prescribe, *in absentiâ*, I ordered a mixture, which was forwarded to him, containing, as in the previous case, an ounce of the chlorate dissolved in twenty of water, but with the addition of one drachm of the tinctura ferri perchloridi; dose as above. A fortnight after, the young man called to thank me for his cure. Nearly five years have since elapsed without a relapse, save on one occasion, when, having lost a train, he ran a distance of two or three miles, when a slight bleeding occurred, which was staunched by his pocket-handkerchief.

Hæmaturia Renalis—W. McN., aged 25, a saddler by trade, living at Albert Bridge Road, Belfast, of very delicate constitution and deformed spine, and subject to lumbar pains, consulted me in July, 1863, for a very profuse discharge of bloody urine which had troubled him for many months, and for which he had been treated ineffectually by several medical men. The blood came in large quantities, mixed, but not suspended in the urine, apparently from the kidney; the bladder was healthy and free from calculus, having been carefully sounded by my friend Dr. Murney. I tried for a time a number of styptics, etc., in vain; among the rest the tincture of iron; when, on recurring to my favorite remedy, and joining to the iron the chlorate of potash in the usual dose, immediate relief was the result. For a period of twelve years, the man was subject to periodical returns of the affection, perhaps twice in the year. His custom was to have the prescription renewed, generally without reference to me, and with the same happy result; he was thus enabled to continue at his trade, and to assist his friends, until the month of August, 1875, when, having taken a long drive upon a rough road, the hemorrhage recurred with great violence, and the attack terminated fatally in ten days. I had not the opportunity of post-mortem examination.

Purpura Hæmorrhagica.—I was requested by some charitable ladies, in the summer of 1865, to visit a factory worker named Hagan, who lived at 58 Mary street, Falls Road. She had been confined to bed for thirteen weeks, and been carefully

attended by the dispensary doctor of her own and the Shankhill districts. I found her much exhausted by a continous drain of blood proceeding from the gums, nose, bowels, vagina and bladder. She was profusely covered with purple maculæ on the chest, arms, legs and abdomen. Her diet had consisted for months exclusively of bread and tea, alternated with rice, with little milk, potatoes being scarce and dear, and not having any one to cook them. I advised a complete change of diet, and prescribed the usual mixture. When I called to see her at the expiry of a week, she opened the door herself, quite recovered, all bleeding having ceasad ere the mixture was finished. As a later example, I may give the case of Sarah Flanagan, aged 12, an inmate of the St. Patrick Industrial School, Belfast, whom I visited on May 8th, 1878, suffering from bleeding from the nose and gums, her body being dotted freely with the characteristic purple spots. In her case, two drachms of the salt, with thirty minims of the tincture of iron, effected a cure, every trace of the disease having disappeared within a week. Her diet was of course looked after.

Menorrhagia.—Miss L., a school teacher, aged 38, wan and feeble, very tall and delicate, consulted me for a discharge of blood, which had continued, with short intervals, after a menstrual period several months previous. She suffered from severe pain in the back, from palpitation, and the other constitutional symptoms consequent on a continuous drain. She had tried various remedies prescribed by other medical men without effect. I advised relaxation from her duties for a time, and the chlorate and iron mixture. I saw her some days afterwards; her color began to improve, the discharge diminished, and finally disappeared The mixture was renewed and taken occasionally as a preventive.

Hæmorrhage from the Womb.—Mrs. McS., mother of five children, called my attention to a profuse dischare of blood, which had recurred a fortnight after her previous confinement. On examination with the speculum, I discovered an abrasion of the os, from which the blood flowed. She was treated topically by the application of strong perchloride of iron and by the internal use of the mixture. The case was rather tedious, but she always spoke of the sustaining power of the mixture, and the sinking feeling which occurred when the dose was intermitted. She recovered in about a fortnight.

Hæmatemesis : Hæmoptysis.—There yet remain two highly important lesions for consideration, in the treatment of which, when they can be traced to the hæmorrhagic diathesis, this remedy has invariably proved beneficial, especially as its administration need not contraindicate the use of more energetic hæmostatics, such as ergot of rye, ergotin given hypodermically or otherwise, ice, acetate of lead, tannic or gallic acid, etc., if given at sufficient intervals. In cases of hæmatemesis due to malignant disease of the stomach, liver or spleen, and

in those cases of hæmoptysis caused by hypertrophy of the right ventricle, in pulmonary apoplexy due to a peculiar condition of the parenchyma, or from hæmorrhage caused by the breaking down of a tubercular deposit, and the laceration of an artery passing through the deposit, it is not to be expected that a constitutional remedy should be solely depended on; but when a state of pulmonary plethora exists evidenced by an effusion of blood from the mucus membrane, in the absence of pulmonary disorganization, and in those cases where a sudden cessation of an accustomed discharge, menstrual or otherwise, causes congestion of the mucus membrane of the stomach or of the bronchial tubes, and vicarious discharge from either, then the liberal administration of the chlorate of potash and iron will be found as salutary and satisfactory as in the other phases of the disease.

Having thus presented a few typical cases, behind which, had opportunity permitted, I might have marshaled a host of equally striking examples, I have but to remark that, while it is the duty and the instinct of the physician, after obtaining satisfactory results from any remedy, to seek for and to theorize upon the *modus operandi* of that remedy, it is wise, while he remains steadfast and immovable upon the basis of practical experience, to advance with diffidence and reserve the solution which to him appears satisfactory, but which others equally or better fitted to judge may not believe to have passed beyond the region of hypothesis, lest, in condemning the superstructure, the foundation itself may suffer in their estimation.—*British Medical Journal*, Oct. 30.

RACE AND INSANITY

In the *Journal of Nervous and Mental Disease*, Oct., 1880, Dr. E. C. Spitzka analyses the statistics of the New York City Asylum for the Insane, an institution which is perhaps more cosmopolitan in the character of its insane population than any other in the world, with special reference to the liability of the different races or nationalities to mental disease. After making all allowances for defects of classification, peculiar circumstances, social conditions, and all other modifying agencies, Dr. Spitzka concludes that, as the data will permit of an answer to the question as to influence of race on the production and prevalence of insanity, it may be stated as follows: "On the whole, the different forms of insanity occur in nearly the same proportions in the Anglo-Saxon, Teutonic, Celtic and Hebrew races; paralytic insanity is most common among Anglo-Saxons, and least common among negroes; melancholia is most common among the Germanic peoples; the tendency to terminal dementia is greater in the Anglo-Saxon than in the German or Celt; and the forms dependent upon hereditary taint are most common among Hebrews. With this it is in

accord, that since the termination in dementia and the influence of heredity are the factors which chiefly cause an accumulation of the insane population, that the Hebrew and the Anglo-Saxon should have the highest proportion insane of their respective populations." The paper and the tables accompanying it are very suggestive, and the investigation on which it is based is, so far as we are aware, the only systematic one of its kind on its special subject.—*Chicago Medical Review*, Nov. 5.

THE WHALE TENDON LIGATURE AS A SUBSTITUTE FOR LISTER'S CATGUT LIGATURE.

MR. EDITOR.—I have received recently from my friend, Dr. Leland, of Tokio, Japan, a little pamphlet upon the Whale Tendon Ligature, by T. Ishiguro, M. D., chief surgeon of the imperial Japanese army, and if the subject has not previously been brought to the notice of the readers of the *Journal*, I will ask you to allow me to make the following extracts, which I think will have something of interest for the surgical community.

The mode of preparing the ligature, he says, is as follows: "First, a whale's tendon is dissected by the points of needles, and teased out until the fibres look very like those of hemp. Secondly, the longest and finest fibres among them are selected, and they are then spun together as ordinary silk thread." The ligature so made was subjected to the following tests: "First, a weight of four pounds four ounces was suspended on a cord of one metre in length and 0.18 gramme in weight, but it was not broken." "Second, the ligature was boiled for seventy-two hours, and then kept at blood heat for five days, but only showed slight expansion or softening, without the least dissolution or loss of strength." "Third, the ligature was soaked in a solution of pepsin (two drachms), dilute hydrochloric acid (one drachm), and aqua (five ounces), and then kept at the temperature of the body for twenty hours, but showed not the least sign of dissolution." "Fourth, it was tested likewise by soaking in acetic acid and lactic acid (both in a diluted state) and also in liquor potassæ, in all of which cases the strength of the ligature was proved by like results." "Fifth, the first actual trial was made upon a patient in whom excision of the femur was necessary. In this case one of the ends of the ligature was cut off close to the knot, while the other was left hanging out of the wound. After the lapse of seven days an examination was made, and it was found that not the least trace of the ligature was to be detected. Subsequent trials proved that three days after the application were quite sufficient for the full absorption of this ligature." Trials were then made as to the rapidity of its absorption, for "a too speedy absorption would cause secondary hæmorrhage." In the amputation of a leg the ligature was applied, and there was not the least manifestation

of secondary hæmorrhage; a like success also followed in the ligature of the femoral artery.

In conclusion, Dr. Ishiguro says the merits of the ligature are the following: "First, it is the cheapest. Second, it is readily conveyed and preserved. Third, it is easily procurable. Taking these three points into consideration, and bearing in mind the strength which the ligature naturally possesses, and which can be still more increased by soaking it in carbolic oil, it may be concluded that it can be relied on to answer every purpose of a ligature and suture."

I will add that I am informed by Dr. Leland that a piece of the ligature six feet in length is worth from twelve to fifteen cents.

EDWARD O. OTIS, M. D.

Boston Medical and Surgical Journal, September 30th.

HOW TO AVOID YELLOW FEVER.

A SYSTEM OF PRELIMINARY ACCLIMATION TO PREVENT YELLOW FEVER OR TO DIMINISH ITS SEVERITY.*

By Dr. DON VICTOR PEREZ, Vice President of the Medico-Chirurgical Academy of the Canary Islands, Corresponding Member of the Societies of Cadiz and Barcelona, and of the Anatomical Society of Paris, etc., Translated from the *Boletin de Medicina Naval*, by T. P. CORBALLY, A. M., M. D.

In the year 1875, as may be seen in the Transactions of the French Society for the Advancement of Sciences, I published, for the first time, my system of preparing the emigrants who, in such numbers, go from these islands to Cuba, so as to enable them to escape yellow fever.

That society, which holds its meetings every year in some one of the larger cities of France, met, in 1875, in the city of Nantes. The time allowed to each member is always short, and never sufficient for the reading of a lengthy paper, nor for a prolonged discussion; I was, consequently, limited on that occasion to the pointing out of what I had established years before—a system of preparatory acclimation, which I illustrated by referring to some facts which strengthened the position taken, and I merely alluded to the facts which form the ground-work of the method which I am now about to give in detail.

The number of cases which may be cited in confirmation of this method is now very large, and the people who have witnessed them are beginning to remark the success attending it, and to give it increased confidence. Encouraged by some of my friends and fellow practitioners, I now propose to give a more detailed account of all the circumstances relating to this important question of prophylaxis, and submit it to the judgment of the medical profession.

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*Read before the Medico-Chirurgical Academy of the Canary Islands, January 13th, 1880.

I will first give some account of the facts and the ideas which led me to try this system, and will cite hereafter some of the most important and best authenticated cases. I will also give, before I close, some statistics of the mortality in Cuba, the severity of which I deem necessary to disclose, in order to counteract the false and interested assertions with which recruiters (armadores) and traders delude their simple and unfortunate victims, by representing the dangers which they must there encounter as mere trifles.

In 1849, when I was studying medicine in Paris, one of my teachers performed a series of experiments in order to test the power to prevent putrefaction, of certain substances which he thought possessed this property. Many such were made, and most of them fully realized his expectations.

In an article which I published in 1865, in Santa Cruz de Teneriffe, under the title, *Notes on the Preservation of Cereals*, these various antiputrescent substances were given, as they had been previously, in 1846 to 1849, by Prof. Ed. Robin, and they may be found in the *Gazette des Hôpitaux*, in *La Revue Scientifique* tome 36, page 97, and in other periodicals. Of all the substances capable of preventing putrefaction then discovered, coal oil (aceite de hulla) attracted the most attention, and it was the one we found most serviceable at that time in all our experiments, and it is the one I have used most frequently in my experiments since I have been in these islands. The purified oil could not then be found in France, and I remember that it was only after great search that we found two gallons in a drug store in Southampton.

It is not without special reasons that I dwell upon this circumstance, since it goes to show that, previous to that time, this article, which I shall call primitive (primordial), had no medical uses, nor had any of its derivatives, as benzine, coal tar, phenic acid, carbolic acid, etc., which are now so justly celebrated. This volatile product, like other oils of the same class, arrests the process of putrefaction, as was foreseen by Prof. Robin, either, as he thought, by neutralizing the action of the oxygen, or, according to the theory of M. Pasteur, by destroying the animalculæ or microscopic vegetations which, in his opinion, are necessary to cause the decomposition of organic substances.

This new class of agents which has the power to preserve organic substances by preventing putrefaction, acts, although in a manner very different, like the hypophosphites, of which so much has been said lately; like the metallic salts tannin, and other agents recognized as preventives of putrefaction and fermentation; in a word, as preservers of organic substances. Another scientific truth which he began to teach about the same time, and one which is generally accepted at the present day, is that these same anti-combustible agents, *at the same time that they lessen or entirely prevent decomposition, the devel-*

opment and the formation of new products in substances deprived of life, they also destroy or lessen the tendency to destruction in those in which vitality has not been lost, by cursing, in proportion to the intensity with which they act, the destruction or the diminution of the most important effects of the morbific agent. This is a most important and fruitful principle, established by the author, and one from which a great many modern scientific truths have been deduced. It is one of the two on which we rely for the establishment of our method of preventing yellow fever.

The modifying influence of the combustion, necessary to the support of the vital functions, being admitted, and the agents most easily applied and most certain in their effects, at the same time that they are free from danger, being recognized, their application must become varied. We may cite, as an example in surgery, the antiseptic treatment of Lister; in therapeutics, the use of so many agents which are now recognized as possessing the power to lessen or to prevent combustion in the animal economy; in hygiene, the modern theory of alimentation, the various methods of disinfection, etc.

Having been engaged in the study of these substances since 1849, and having made, in the years 1864 and '65, various experiments on animals, in order to confirm certain applications which Robin held as theoretically correct, and also to determine the true action of chloroform, for the reason that its effects are always more dangerous in persons of full habit, such as frequently require the services of a dentist, or in those who are often found wounded on the field of battle, than in those who have been previously reduced by sickness, I then recognized the fact that it was easy, very easy, to reduce the necessary respiration in animals, without endangering their lives, as may be seen in a note which my associate published in August, 1865 (*Comptes rendus de l'Académie des Sciences de Paris*). It would not, then, be difficult to obtain the fourth application, which was pointed out, theoretically, by the same author, in an article published in the *Moniteur Scientifique* for August the first, of the same year, page 711; that is to say, by using the same means we can obtain a diminution of the amount of respiration necessary, in such persons as are about to emigrate to America, so that they may arrive there in a condition of artificial anæmia, similar to that always produced by the action of the climate of tropical regions on the white inhabitants of higher latitudes, which condition is generally known by the name of acclimation, and may be observed in all those who return from Cuba.

The idea of being able to produce, without any risk whatever, the same results which climate alone has hitherto effected, filled me with confidence as to the result, and gave a certain degree of security in undertaking my experiments. Indeed, Europeans who have been for a long time resident in these tropical climates, are not the only persons who enjoy the great-

est immunity, when they are exposed to the contagion of yellow fever; on the contrary, those who, on account of race, of temperament, of sex, of age, or from the peculiarities of their mode of life, or on account of medical treatment for previous diseases, may be more or less anæmic than usual, are those who undoubtedly suffer least on their arrival at points where fever is endemic.

Besides, we find that it is chiefly negroes and other races of color, those of a lymphatic temperament, women, young children, inebriates, those who have undergone mercurial or arsenical treatment, who, without exception, run less risk than those of a sanguine and robust temperament, those who arrive full-blooded, requiring the active respiratory powers which cold and temperate climates render necessary in northern nations.

We know that among our emigrants, the inhabitants of Santa Cruz, of Candeleria, and of all the southern shores of our islands, are much less susceptible to tropical diseases than the people of central and of elevated regions; and that the inhabitants of the north of the Peninsula are more so than the people of Andalusia. Can any one doubt that the temperament of those who are attacked with greatest violence, as those of whom I have just spoken, have more of the sanguine character than those who are more favored? That is to say, that the inhabitants of the interior and of the north of Spain are farther removed from the anæmic condition which a residence in the Antilles produces, than those of Andalusia and those living on the southern shore of the Mediterranean. Could not any one recognize in a public assembly, by simply inspecting the temperament and other characteristics, the great majority of persons belonging to either of these regions? Is it not well known that in epidemics which have occurred among us, those recently arrived from the interior suffer more than the inhabitants of the sea coast?

* * * * *

If I have dwelt so long on this topic, it is because, being so fully convinced of the possibility of producing, artificially, the anæmic condition of which I am speaking, and also of the advantage of having this same anæmic condition, when one is obliged to expose himself to the action of miasms, of animalculæ, of vegetable effluvia, or of any other contaminating substance which produces blood poisoning by the destructive fermentation productive of that condition known as yellow fever, it was natural, logical, and easy to associate the two ideas, and thence proceed to the experiments. This is what I have done for years past, and yet, in none of the recent works which I have carefully examined on the literature of the subject in those countries that are undoubtedly at the head of scientific progress, have I been able to find any system of prophylaxis distinctly laid down.

It must be admitted that certain articles have been occasionally recommended, such as coffee and arsenic, of which I myself published an account of a verbal report given to me by an English physician, Dr. Thomas, in 1865; phenic acid, which has been recommended by Dr. Declat since 1873, the hyposulphites, which Prof. Polli, of Milan, has introduced with so much effect and so much skill in the method of induction, and which, although recommended for other purposes, bear so much analogy to that which I have proposed in the fever in question; but no one has attempted to give the name of system, of a naturally and logically deduced method, to those simple recipes current in times of epidemics, or applicable to certain surgical cases, which bear as much analogy to the principles which we have advocated and to our method of applying them as the methods of using creasote and other empyreumatic substances bear to the system to which Lister has so gloriously given his name. I say gloriously, for, although in this most important advance in the surgery of the present century, we may, as generally happens with great reforms, see that the ideas which have led to them come from other sources, the glory of having been the first to realize it cannot be denied to the author who has given his name to the method. There is always something in the atmosphere of contemporaneous science which, when any of these new methods claims the right of domicile in it, disputes its claim; and there are always theoretical ideas, systems more or less logical, lucubrations of men possessing great powers of intuition, who, on seeing their ideas realized, dispute its justice, and seek to belittle the practical man, the worker and his discoveries, the idea of which was originally, perhaps, the sole product of his own reflections. Before Lister put in practice his method of pulverization and his antiseptic treatment of wounds, in 1872, before Calvert rendered benzine familiar, enriching various industries therewith, before Declat gave us the various preparations of phenic acid and Petit advocated the properties of coffee, etc., etc., there was known to science the principle of the antagonism between certain substances possessing the property of preserving organic matter, and of modifying at the same time the intensity of vital action, which I have referred to above, and from which I, more than any one else, have been able to draw such results as have enabled me to perfect my system. In the reference which I have made to the *Revue Scientifique* may be seen, in the fourth application, what refers to the prevention of yellow fever, which was the result of our study at that time, of the variety and the utility of the applications to which such important principles might lead. I consider it, therefore, a sacred duty to see that no one who studies this question can refuse to attribute the first ideas of all these reforms to Prof. Edouard Robin. Possessing a mind highly philosophic, a genius truly far-seeing, which has enabled him to foresee all the results, although he accom-

plished nothing experimentally, he is none the less deserving of the honor, nor less worthy of the consideration which is due to him by science and by humanity.

Before closing these general remarks and beginning the exposition of the details of my method of preparation, I wish to add that, besides the action of preventing combustion, and consequently, in the same ratio, favorable for producing anæmia, which is the condition desired, and which is inherent in all the principles of my method, I must consider that element which, introduced into the current of the circulation, gives to the blood certain properties opposed to the development in it of all miasms,* which are the cause of the fever of which I am treating.

Suspecting this result, I collected, in 1849, in the surgical clinic of Prof. Guersant, blood from the same individual and from the same region of the body, both before and after he was anæsthetized, and in the course of our experiments M. Robin and myself saw that putrefaction was retarded in a remarkable degree in the vial which contained the blood taken while the individual was under the influence of the anæsthetic. From that time, then, dates the idea on which I am about to insist, and which is the other factor which explains the relative immunity of all those who are more or less saturated with the anti-combustible, anti-putrid substances which have been the cause of anæmia.

Not wishing to extend this article to too great length, I withhold much that the importance of the subject would warrant, but I think that what I have said will be sufficient, when addressed to companions who are familiar with the great advances these questions have made since that time; and I hope it will be sufficient to remind them that, as Dr. Polli gave, internally, the sulphites, the efficacy of which has already been demonstrated, to strengthen the system against the causes which produce septicemia, in surgical and in obstetrical cases in which the method of Lister could not be applied; and as Dr. Eigenbrodt met with great success in the use of benzoate of soda as a prophylactic in an epidemic of diphtheria, so phenic acid may act in the same way in regard to the various special morbific poisons, and which succeeds better in yellow fever than any other substance that has been employed.

Undoubtedly the idea of preventive medication has great attractions for physicians at the present time; the experiments on animals, for the purpose of confirming this principle, are so often repeated, and their results united to observations on the human species have so much force, that it is certainly logical to infer that it is not alone the condition of anæmia that we are looking for which produces the immunity from yellow fever,

*The same may be said of any kind of virus.

but the state of saturation with anti-putrid elements in which the system is found, and which contributes, conjointly with the anæmia, to effect the desired preservation.

From the time when we began our first experiments, we were guided by those ideas, and the references given show that, as early as 1849, they were in our mind as well-defined principles. To-day we see them applied on every side, and those using them are both earnest and confident. Then, too, we cannot omit to mention that, before the publication by M. Robin, in the same year, a careful examination of the records of scientific discovery shows nothing to be compared with it for importance and originality.

Having stated these preliminaries as briefly as possible, and remembering that, in a country like ours, in which large collections of books are not to be found, and periodicals devoted to professional subjects are scarce, it is impossible to record the names of all who have labored in this field, I pass, without further delay, to give an account of my practical studies and of the results that have attended them.

As I stated in the communication I presented in Nantes, the means I employed to retard combustion were arsenic, the preparations of phenic acid, and coffee; internally and externally in form of vapor, coal oil, benzine and phenic acid; together with defective ventilation of the cabins on ship board, or of the sleeping rooms on shore, the atmosphere of which ought always to be charged with vapors. Arsenic I have given in solution and always in very moderate doses; five to ten centigrammes (from one to two grains) of arsenite of soda, dissolved in 250 grammes (about 8 ounces) of water, to be taken in teaspoonful doses, more or less frequently, according to the time that must elapse before the individual arrives at the point of destination. Experience has shown in this case, as well as in diseases of the skin, the advantage of administering small doses of this preparation: its effect, although slower, is sure to be observed in time, and is more certain, and the system tolerates it much better. Those who have plenty of time before leaving home, may take only one teaspoonful a day of the solution above described, and, according to my observation, two months' preparation are sufficient, even with this small dose; however, the treatment should be continued for some months after arriving in the warm climate.

Those who are willing to follow this treatment use coffee in great quantities, and not only do they take it at every meal, but they use it prepared in various other ways (*sopas de café ó gafio**) with which the coffee is mixed. These two substances are the principal agents used in the treatment. Persons who travel as third-class passengers, sleeping between decks, could not make proper arrangements, unless the captain of the ves-

*This the author states to be a dish peculiar to the Philippine Islands.

sel should adopt special measures for that purpose, to live in an atmosphere impregnated with coal oil or with phenic acid, and it would be no less difficult to induce them to take the syrup of the acid, prepared by Declat, or any other preparation of this kind, which I always recommend to those who can be induced to follow such a course. From this statement it will be seen that the emigrants who follow my advice may be divided into two classes: the greater number use only arsenic and coffee, and the others add to this the use of phenic acid, either by inhalation or internally. The effect of artificial anæmia is much more marked, and appears much earlier in the latter class, as I pointed out in my communication at Nantes, from which it may also be seen that the result of lessening the combustion in the system to too great an extent, would be to unfit the individual for work. Such result must certainly be avoided, as it would seriously compromise the use of the method.

If, from the cases in our possession, we might deduce any general principles, we would say that, by using arsenic and coffee alone, there is the advantage of effecting the change in the system more slowly; and when, either for want of time, or from any other cause, we use the acid vapors or the acid itself internally, the anæmia is more intense, may be troublesome, and is not, on the whole, more advantageous for the individual seeking immunity.

If, when preparing soldiers, or even private individuals, they could remain, while using the internal remedies, in a climate at once warm and somewhat debilitating, such as is found on the southern shores of our islands or at Santa Cruz, the result would be much more favorable.

Without entering into any details regarding the cases already referred to, I may say that very many have followed the directions I have given them, but the results of many cases I have not been able to ascertain; I will mention only those of which I possess a complete history.

The following are the cases:

1st. A clergyman, Vandama, native of Palma, who was one of the first prepared, went to Cuba, took the fever, which in his case was very mild; he had previously taken only arsenic and coffee.

2d. Six marines belonging to the frigate *Zaragoza*, five of whom were natives of the Peninsula, and the sixth was a resident of the Peninsula from childhood, although born in Caracas. These sailed for Cuba in their frigate, in March, 1876, and began the full regimen at that time: arsenic, coffee in large quantity, vapor of phenic acid, and defective ventilation in their cabin. On arriving in Cuba they had followed the treatment for forty-seven days, and continued it for some time longer. They remained two years in different parts of the island, and returned to Spain without any attack of the fever.

3d. D. G. L. Fernandez, a native of Palma, embarked in April, 1875, and took arsenic and coffee. He arrived in Havana in June, having followed the treatment two months. He remained until the end of July and returned home in good health.

4th. D. L. G. Beltran embarked in 1876, having had the same treatment; remained some time in Cuba and returned to Madrid without having had the fever.

5th. Similar to the fourth.

6th. Da. J. G. de Perera and a female servant embarked in 1877 for Cuba, prepared as those above; the servant had no sickness, the lady had the vomito, but very lightly.

7th. Juana G. de Brito, with a family of six persons, sailed in the early part of 1879, having taken only arsenic and coffee. All had the fever, but in so mild a form that I received a letter thanking me, as they attributed their recovery to the preparation they had, because many of those who were with them died of the fever.

8th. D. F. Hernandez with his family, consisting of ten persons, sailed in the beginning of the same year, having had the same preparation. Four of them had the fever in a very mild form, and quickly recovered. The fifth, the mother, recovered very slowly, having had a miscarriage and copious hemorrhage; the rest of the family were not attacked.

9th. F. and M. Hernandez sailed towards the end of 1878, having taken arsenic and coffee, and a few inhalations. They were respectively twenty and eighteen years of age and of sanguine temperament. Both lived in the city for some time, being occupied as carpenters; at present they are engaged as sailors on the coast of Cuba. They have had some slight indisposition, which, they think, was a mild attack of the fever.

Here is a group of thirty emigrants, of whom fifteen had the fever, but none of whom died; the others remained free from attack. Of these thirty emigrants, eight, besides the arsenic and coffee, used the inhalation of the preparations of phenic acid; of these eight, two think they had the fever, but in a very mild form; twenty-two used only the arsenic and coffee, and of these thirteen had the fever in a mild form.

The number of cases here presented is certainly limited; especially as in a number previously given in Nantes, one who had used phenic acid internally, and by inhalation, had a light attack of fever, but suffered before and after it from depression of spirits, inability to work, and general dropsy (abotagamiento), consequences, no doubt, of the abuse of the preparations employed. But if the number of cases is small, it proves very clearly the great value of the means recommended, in order to prevent the terrible disease to which they were exposed. Every one who knows anything about the condition of emigrants under similar circumstances, knows very well that under ordinary circumstances, not only would the greater number have been attacked, but we might expect some deaths.

The following table is taken from a very interesting work on naval hygiene, published in Madrid, by Dr. D. Angel Fernandez-Caro, a distinguished surgeon in the navy. It shows the mortality in the military hospitals in Cuba for the five years, from 1871 to 1875, which are included in the period that I have been describing.

YELLOW FEVER IN HOSPITALS IN CUBA FROM 1871 TO 1875.

	ENTERED.	CURED.	DIED.	PER CENT.
1871	3,449	1,949	1,472	42.67
1872	5,201	2,924	2,402	45.39
1873	2,893	1,885	1,040	35.93
1874	1,038	656	424	40.08
1875	2,017	1,059	911	45.76
Total	14,688	8,473	6,249	42.00

We see that the average mortality was forty-two per cent. nearly. Is it possible that, of my fifteen cases that were attacked, every one would have recovered, when, according to this table, at least six or seven would have died if they followed the course of those that were not prepared? Is not the method worth a continued trial by those who are interested, especially in the army and navy?—*Sanitarian*, Dec.

WHAT CAN MINNESOTA DO FOR CONSUMPTIVES?

The antiquarian who shall examine our climatological literature some centuries hence, if he be an inductive philosopher and acquainted with Lucan, will probably take out his pencil and record, as his conclusion, *Jupiter est quodcunque vides, et quocunque moveris;* for, whether Cowes, or Mentone, or Cairo, in the Old World, or St. Augustine, or St. Paul, or Denver, in the New, be the theme, good and sufficient reasons will be found to be adduced in each instance to establish the proposition that each particular spot is the world's sanitarium, and that it possesses certain undeniable advantages over its rivals.

The unfortunate practice of extravagant laudation goes often hand in hand with failure to discriminate not only between different cases of the same malady, but even between different diseases; and so the fact that a given locality has acquired a reputation as a health resort is regarded as a valid reason for recommending a trial of its virtues to those whose ailments have failed to yield to other treatment, with but little regard as to what may be their nature. And thus a resort possessed of material advantages for cases judiciously selected falls undeservedly into disrepute because it does not prove to be the grand catholicon for human ills.

In common with other sanitaria, Minnesota has suffered from this system of what may be termed miscellaneous recommendation; and the following statements are offered in the hope that the presentation of a few well-ascertained facts, as

to what may be reasonably expected from its climate in cases of phthisis and what may not, will be of some assistance in enabling professional men to form an intelligent opinion when a visit to that State is contemplated for the relief of consumption.

Those who are familiar with the climate of Minnesota will pardon the unavoidable repetition of statements which have been already frequently made.

The elevation of Minnesota above tide-water, ranges from eight hundred to one thousand feet. Its soil is composed almost entirely of drift deposits of three varieties—blue clay, stratified clay, and gravel and sand; and these are covered to the depth of one or two feet by a rich silicious loam. The thermometric record for the last four years is as follows, the figures in all the tables indicating the annual mean:

	Maximum.	Minimum.	Difference.
1879	71.7°	14.2°	57.5
1878	71.8°	23.7°	48.1°
1877	69.9°	20.4°	49.5°
1876	68.5°	14.5°	54.0°

The following table represents the barometrical observations for the same period:

	Highest.	Lowest.	Difference.
1879	30.437	29.397	1.041
1878	30.315	28.353	0.962
1877	30,372	29.444	0.928
1876	30 444	29.376	1.068

The mean relative humidity for 1879 was 65-3; for 1878, 67-7.

The amount of rain and melted snow is shown in the next table in inches:

1879	32.39
1878	22.78
1877	28 81
1876	23.67

The prevailing winds in summer are from the southeast; they are, however, more variable at this season than in the autumn or winter, when north and northwest winds predominate. The latter are dry in Minnesota, although cold and damp in the more eastern States, because of the different conditions under which they reach the two sections—in the one case coming over the great lakes and Hudson's Bay, and in the other over a surface of land equal in area to the United States east of the Mississippi.

The persistent northeast storms of the Eastern States are infrequent in Minnesota. During 1875 the wind blew from that quarter on but ten days, in 1874 on twelve, and in 1873 on sixteen, and in no instance during more than two consecutive days.

The principal conditions, then, which have to do with climate are as follows; considerable elevation, a soil admitting

of rapid absorption, low mean temperature, somewhat low barometric pressure, and winds which, especially upon the exposed prairies, attain a high rate of speed, but bring with them very little moisture—in other words a stimulating climate; and, speaking in general terms, under such circumstances we should expect to find that pathological processes, of which an active hyperæmia and a tendency to rapid extension are distinguishing features, will fail to be arrested and might even be aggravated. On the other hand, it will be reasonable to look for improvement in those cases in which the progress of the disease is slow, and indurated walls are opposed as a more or less effectual barrier between the diseased portions of lung and the unaffected pulmonary tissue. The stimulating effect of the climate, prejudicial in the one case, is helpful in the other.

As the object of this article is not to offer hypotheses, but simply to record facts, the *rationale* of the effect of low temperature and of a climate such as is under consideration will not be dwelt upon. The known resultants are a greater demand for oxygen by the various tissues, a consequent increased activity of the respiratory centres and more complete expansion of the lungs, with quickened appetite and improved nutrition. The facts observed during upwards of thirty years in Minnesota are such as to justify these conclusions. To speak broadly, the experience of physicians indicates that patients to whom the conditions in question are most suitable are those in the incipient and, if possible, in the pretubercular stage of consumption. Next to these, as likely to be benefited, is the class to which reference has been made, in whom the form of the disease is essentially chronic; nor is hæmoptysis in either class a contra-indication to a trial of the climate. It seems almost superfluous to say that in the case of the latter as well as of the former class the earlier relief be sought the better; but even when recovery is out of the question, instances are numerous of persons who have come to Minnesota with an expectation of life amounting at most to a few weeks, but who have acquired a reasonable degree of vigor, and have been in the active discharge of professional, official or mercantile duties for periods varying from five years to ten, and even longer; who are not well, and who will eventually yield to the disease fastened upon them, but whose lives have been greatly prolonged, and the sum of whose comfort and usefulness has been greatly increased.

Dr. Lincoln, of Wabasha, Minn., says, in writing of the State as a health resort, "I would not have an atmosphere too dry nor too damp. I would have the temperature variable, so as to induce a necessity and inclination to exercise, that digestion and nutrition of all the tissues may be promoted. I would not place myself at an altitude where I must breathe thirty times a minute to inhale as much oxygen as I ought to get in a respiration of twenty times a minute. I would look for a country

where I could remain in the open air a part of every day. I would live in a house where an equal temperature could be maintained, and good ventilation was active night and day. I do not believe it best for a patient with advanced phthisis to leave a comfortable house, be that where it may; but for the advantage of persons in the incipient stage of the disease the State of Minnesota has, in a great degree, the favorable conditions herein mentioned."

As to the length of time requisite for the relief of consumption, it may be said that in many cases permanent residence is a *sine qua non*, while in almost every instance only a prolonged stay can be relied upon for recovery or even for decided improvement. It has happened many times that apparent restoration has begotten a false sense of security, and return to a former home has rekindled the disease and led to a speedily fatal issue.

It is better, for obvious reasons, that invalids should come to Minnesota in the summer or early autumn rather than late in the latter season or in the winter—a precaution often disregarded. As regards persons who have derived or who may derive the minimum of benefit from a trial of the climate, a word should be said.

It has been remarked that phthisis of an acute type is unlikely to be benefited, and that in other cases the prospect for relief is in direct proportion to the period at which relief is sought. In addition to this, the climate of Minnesota tends to the development of catarrhal affections of the respiratory tract, and catarrhal phthisis, especially when the bronchial apparatus is extensively implicated, must be placed in the category of varieties least susceptible of improvement.

No distinction is made in these remarks between pneumonic and tubercular phthisis. While the prospect of ultimate recovery is, of course, greater in the former, the latter may at least be benefited, subject to the conditions which have been mentioned.

The following statistics are offered, that comparison may be made with corresponding returns from other localities. It should be borne in mind that a considerable number of persons come to Minnesota with the disease so fully developed, that relief is impossible, and that not a few of those whose death is attributed to consumption are in reality victims of senile bronchitis. The percentage of deaths from phthisis in Minnesota was, in

1879	9.9
1878	10.5
1877	11.1
1876	10.6

Med. Times, Nov. 6.

QUININE PRODUCTION IN INDIA.

The *Pall Mall Gazette* says that the experiments begun ten or twelve years ago for naturalizing in certain parts of India the best varieties of the cinchona or peruvian bark tree have been attended with the most remarkable success, and with beneficial effects still more remarkable (*British Med. Journal*). In the treatment of the fevers and other forms of disease endemic in India the employment of quinine has always been a chief means of cure and prevention. But the increasing demand had raised the cost of the imported drug to a point which rendered its use impossible to millions and tens of millions of the poorer classes of India. Hence it occurred to a few of the more enterprising spirits in the Indian goverment that vigorous efforts should be made to acclimatize the cinchona tree itself in certain districts of India and in Ceylon. The experiments have been entirely successful, and there are now in various stages of growth probably millions of cinchona plants already yielding the peruvian bark so plentifully and so perfectly that the price of quinine has fallen in Ceylon, and other parts, to about two rupees (three shillings six pence) the ounce, and to fifty cents the ounce for preparations of a diluted strength. There is the strongest possibility, amounting to certainty, that in six or seven years the Indian production of quinine will be so large, and the price so low, that it will become a considerable article of export; bearing in mind that every fall in price means extending use in India in the cure and prevention of fever and disease, and therefore the cure and prevention of want and suffering among the poorest class of the native population.—*Louisville Med. News*, Oct. 23.

CADAVERIC ALKALOIDS.

The properties of the alkaline compounds which are formed during the decomposition of animal tissues have been the subject of an investigation by MM. Brouardel and Boutmy, which has been communicated to the French Association for the Advancement of Science (*Lancet*). Such substances have been called *ptomaines*, and they have been found in the bodies of individuals who have died a natural death, and also in those who have been poisoned. In cases in which the tissues are to be subjected to chemical analysis it is important to prevent the formation of these alkaloids, and the most efficient agent for this purpose is cold; and hence M. Brouardel has arranged for bodies which are to be subjected to analysis to be kept in the Morgue in chambers of refrigerated air. The "ptomaines" come into the general class of organic alkaloids, and many of them are most energetic poisons, others being quite innocuous. Though there are many distinct substances in the class, identical bodies are formed under very different conditions of putre-

faction. The same alkaloid, for instance, was found in two individuals who were poisoned, the one by carbonic oxide, the other by prussic acid. A few are fixed, but the majority are volatile. A substance closely analogous to veratrine was found in a body which had been eighteen months in the Seine, and another in a goose which had been subjected to the heat necessary for cooking. Certain of these substances are clearly poisonous to man, and apparently cause the toxic effects which occasionally result from eating decomposing meat. Symptoms of serious poisoning occurred, for instance, in twelve persons who had partaken of a putrid goose which had contained a peculiar alkaloid, and one of these persons died in a few hours, after nausea and vomiting. These poisonous substances may be quickly formed, for in this case the goose had been purchased in the market in the morning of the day on which it was eaten.—*Louisville Med. News*, Oct. 23.

DIPHTHERIA.

This disease, although one of painful and perennial interest, has nevertheless been discussed almost *ad nauseam* of late years. The reason why this discussion has been so uninteresting, and why the reader of the medical journal has become tired of it, is because it has been fruitless and unprofitable—a proceeding in a circle, ever and anon coming back to the starting point, and making no progress. There has been nothing new advanced, and the changes have been rung on the question of the similarity or non-similarity of croup and diphtheria. Latterly, however, there has been something new—the experiments of Drs. Wood and Formad on lower animals. These experiments are peculiarly interesting in their results and calculated to modify existing views on the nature of the causation of diphtheria. They are detailed in a paper published in the supplement to a recent number of the National Board of Health Bulletin.

In thirty-two experiments in which the animal was inoculated with diphtheritic matter introduced subcutaneously, death followed in only six, and in only one was there any exudation calculated to excite the slightest suspicion that diphtheria was the cause of death. Contrary to the assertion of Oertel, that in animals dying from inoculation of diphtheritic matter the internal organs are infested with micrococci, Wood and Formad found no micrococci. If, then, the animals did not die of diphtheria, what was the cause of death? In the post-mortem examinations in every case the internal organs were tubercular, and in many cases intensely so; tubercular disease was also found in the organs of rabbits which were killed some days after inoculation. The inference is, therefore, strong that tubercle was the direct cause of death in the fatal cases. But it is not necessary to inoculate with diphtheric matter to produce this terberculous condition; in five out of nine instances a similar deposit was

found in cases in which the animal had been inoculated with so-called non-specific matter, this fact showing that in the rabbit simple inflammation is sufficient to give rise to tubercle. In two cases out of ten experiments diphtheritic matter introduced into the trachea gave rise to a diphtheritic membrane, but other experiments have shown that ammonia is capable also of giving rise to a diphtheritic membrane, and so are other chemical irritants.

The above are, briefly, the results of Dr. Wood's and Formad's interesting experiments. It would appear from these that bacteria play no such important part in the production of diphtheria as they have been credited with—entering the system and developing as such in the system and causing the general disease of which the diphtheritic patch is merely the local manifestation. The most that they may do, as has been suggested, is to act as a local ferment upon the exudations of the trachea, as the yeast plant does on sugar, and cause the production of a septic poison which differs from that of ordinary putrefaction, and bears such relations to the system as to, when absorbed, cause the systemic symptoms of diphtheria. These bacteria may be, and doubtless are, constantly in the air, but not in sufficient quantities to cause inflammation in the trachea, whilst during an epidemic they may be present sufficiently numerous to incite an inflammation in a previously healthy throat. The dictum "No bacteria, no diphtheria," is not any more true than that fermentation cannot occur except through the presence of bacteria.

The latest evidence, therefore, tends to support the theory of the local origin of diphtheria, the constitutional symtoms being due to blood poisoning from absorption of septic, and not necessarily specific, material from the seat of the local disturbance. This view of the disease once in vogue, the importance of local treatment from the very incipiency of the attack will be apparent.

If, furthermore, diphtheria may be the result of any intense non-specific inflammation, which seems to be the inference from Wood and Formad's experiments, no inflammation of the mucous membrane of the fauces and throat should be regarded as a thing of trivial treatment.—*Michigan Med. News*, Nov. 25.

THE "THERAPEUTIC BOOM" AND UNSCIENTIFIC ADVERTISING.

By F. E. Stewart, Ph. G., M.D., of New York City.

I speak in the name of scientific medicine. The other evening I was introduced, by Professor W. H. Pancoast, of Philadelphia, to the Philadelphia County Medical Society, as the originator of the preparation known as desiccated blood. In a subsequent discussion brought about by this fact the following point was developed: To protect the medical profession, it is proposed to discountenance the employment of any new

remedy until it is introduced into the Pharmacopœia. Such an introduction can be effected but once in ten years, at which time the Pharmacopœia is revised. I have introduced a new remedy. It has been carefully tested clinically in a number of hospitals, both in New York and Philadelphia, with favorable reports. And now, by the above proposition, its use is to be discouraged until it is admitted to the Pharmacopœia, ten years hence. Against this I most strongly protest.

Now, I do not blame the profession for protecting their interests in every respect, but I question whether the position assumed in this matter be a protection. On the contrary, I believe an attempt to carry it out practically can but act prejudicially to the true interests of scientific medicine.

But it is said there are enough drugs already in the Pharmacopœia, and we do not need any additions to the materia medica. It can hardly be argued that the Pharmacopœia is so perfect that it cannot be added to or taken from. Surely, there are drugs in it of such doubtful therapeutic value that they might as well be left out; but are there no new drugs that are of sufficient value to more properly take their place? If the Pharmacopœia be so perfect, what is the use of revising it every ten years; why revise it at all? Does not the very fact of revision recognize that there is such a thing in science as progress?

But it is said that the "therapeutic boom" is derogatory to any true progress, and should, therefore, be discouraged; that therapeutics is away behind the other branches of scientific medicine and yet in its infancy. The fact that therapeutics is so far behind, would seem to be an argument that it needed "booming," or some other strong stimulant to move it ahead. Not to use any new remedy unless it is in the Pharmacopœia, and to discourage all original investigation for the purpose of discovering new drugs and their action, can hardly help the matter any.

How was it first discovered that any drugs were fit to go into the Pharmacopœia? Have they always been there? Is it not a fact that some of the very best drugs are from the most unscientific sources? Because a drug is used by a quack, an Indian medicine man, or an old woman, is no proof that it is devoid of virtue. By carefully testing drugs in a scientific manner only can their true value be ascertained, and when it is the universal belief by all the old women that certain herbs possess certain virtues, we are just as much justified in trying them, to see if this belief is founded on fact, as were our grandfathers, who collected the best of them to make a Pharmacopœia.

But it is not to discourage original investigation that this stand has been taken upon the part of a certain section of the profession, though that be one of the results. The true reason is for the correction of an abuse. The abuse which these gen-

tlemen wish to correct by it is unscientific advertising. They have become alarmed by the vast amount of misleading advertisements which disgrace the fly-leaves of our medical journals. They see the evil rapidly growing, and propose to stop it. The very fact of the rapid increase of this kind of advertising, and of its misleading character, is abundant proof to them that a great many physicians are being misled by it. It therefore becomes a serious matter, demanding correction. For this reason, then, they discourage the use of all new remedies until they are officially recognized by the United States or other Pharmacopœia.

Now, I do not dispute that the object which is thus aimed at is to be greatly desired, or that by accomplishing it scientific medicine will be benefited thereby, but I do not think the method chosen is a good one. Advertising is legitimate, as long as it tells the truth, the whole truth, and nothing but the truth. It is only when it is misleading that it should be discountenanced. Now, if the profession should take a stand to stop all advertising, and shut down on the use of a single remedy advertised, what would be the result? The result would be this: All the business of a large number of great business houses would come to a stand-still. That is just what the advocates of the new idea under discussion desire. But do they suppose for a moment that all the capital invested, all the stock on hand, all the enterprise and push, all the executive ability and knowledge of methods of creating a demand for goods, would lie idle? What would become of it? Let us see. There is sold in the United States millions of dollars' worth of so-called patent medicines yearly. They are not patented, as a rule, however. The way their sale is controlled, is by notoriety. By this I mean, that though the formula for Helmbold's Buchu is not patented, and never has been, and though that formula is not secret, and is now in my possession, I cannot, nor can any one else, put Helmbold's Buchu on the market for sale. And why? First, because, the law recognizes that it would be a fraud to use Helmbold's name. It would be a fraud upon the public, because its sale is effected from the fact that Helmbold is supposed to make it. Helmbold is held responsible by the people for his article. Helmbold's reputation is at stake, and Helmbold's name controls its sale. But it may be urged that my illustration is insufficient, in that it only applies to patent medicines; that the name in such instances becomes a trade-mark, and is protected under trade-mark laws. But name and reputation control the sale of other remedies than patent medicines. It would not be a well-advised move for any other manufacturing pharmacist to put upon the market a preparation of ergot or ether, and call it Squibb's, though the formula for both Squibb's fld. ext. of ergot and for the manufacture of the ether are official in the Pharmacopœia. The great control, then, of the sale of all remedies

is not in secret formulæ or in patents, but in the name. This is a recognized fact in all trade, be it patent medicines or legitimate pharmaceutical preparations. This is not to be decried, but on the contrary, encouraged, provided, however, it be a control which is gained entirely on merit. Furthermore, so true is the principle here asserted, that the same article, only under a different name, could ever be regarded by the consumer as in every respect similar. To use an illustration: Ayer's pills under any other name, though guaranteed to be the same by Ayer himself, would never have the sale belonging to the old preparation, A certain gentleman doing a large business in a tooth tablet of his invention once changed his paper box for a tin one, to preserve the contents on ocean voyages, and had a large part of the stock returned upon him as unsalable, in consequence of the suspicion excited among the public. A rose, then, by any other name, will not smell as sweet. It has been asked, what's in a name? I answer, there is a good deal more in a name than the profession dreamed of. Take the two names, lactopeptine and peptoine pills, for example, or any other name coined to represent an article, as cinchoquinine, dextro-quinine, etc., if you please. The formulæ of preparations of this class purport to be published on the labels. Be that the working formula or no, the sale of the article is controlled by the name. Some of the names for articles of this description are patented at Washington. And it is rare, in any case, for any one to be so presumptuous as to put out a preparation, though manufactured by the same formula, for competition. A great deal of money is spent in advertising those names, and trade-mark names became very valuable assets.

Now, in this matter of trade-mark names, it seems to me that the trade have got a little ahead of the medical profession in sharpness. I am not arguing here the legitimacy of prescribing them or of prescribing patent medicines. If a standard quality is maintained in the preparation, under the trade-mark, it may be a protection to the prescriber. But it does occur to me that there is an absurdity somewhere. If Hembold's Buchu, Ayer's Pills and Jayne's Vermifuge, are patent medicines, because their sale is controlled by a trade-mark, is not every other remedy controlled by a trade-mark a patent medicine? And if the profession prescribe remedies whose sale is controlled by a trade-mark, name or label, are they not prescribing patent medicines? It is useless to argue about one being a secret and the other a published formula. The formulæ are not patented; it is the name which is patented. It makes no difference whether the formulae are published or not, the patent, in either case, controls their sale and prevents competition, any representation that it is the name and reputation of the house, and not the name of the article, to the contrary notwithstanding.

If all remedies whose sale is controlled by a trade-mark be

patent medicines, then are a great many drug concerns in the patent medicine business. The only difference between one class of patent medicines and the other is in the fact that the former are advertised to the people and the formulae are not put on the labels, the latter are advertised to the medical profession, and the formulæ appear on the labels; but in either case their sale is controlled by a trade-mark.

Now to my point. It is an answer to the question what will become of the capital and ability invested in pushing remedies now advertised to the medical profession in the journals, if that advertising be stopped, or the use of those remedies discouraged? Don't you see the door wide open in the easy convertibility of one form of the same energy into the other? How easy to transfer the advertising from the medical journals to the secular press, the demand among the doctors to a demand among the people. And is not this transition already going on? Look in the daily papers and see. Behold, also, that the demand is made by the argument that the use of these remedies is sanctioned by the medical profession. You have heard of the boomerang—their use is sanctioned by the profession, and it has come back on them.

It is not the "therapeutic boom" that is derogatory to true progress in scientific medicine, though steady work is to be preferred to "booming," but it is unscientific, misleading advertising. Drug houses present remedies to the medical profession unsupported by sufficient scientific information. They control their sale by trade-marks, and have everything their own way, in consequence. About the only scientific information ever presented is the insufficient statements of chemists. Because a compound has a certain chemical constitution, and therefore, theoretically, ought to produce certain effects, is no proof that it will produce such effects, when given in disease. Theory is of very little consequence except to account for positive facts. Facts are what we want in treating the sick; and the reason why a drug will produce certain effects will do to talk about after it has been proved to be able to produce those effects. Then, again, every means is taken to prevent competition by rival houses, and the profession will not report failures, lest they injure their practice thereby; so the truth is never known. There is no objection to a manufacturer saying to the profession that his goods are better than any other man's make, by proving it. Competition in quality is honorable. Competition in enterprise in securing new drugs, preparations, or methods of manufacture, is to be commended. When the happy day dawns, of legitimate competition, then there will be no more mourning over poor drugs and the abuse of pharmacy.

And now, how do I propose to correct these abuses? By setting a good example myself, and urging others to follow it. This I have endeavored to do in the matter of desiccated

blood, and by the help of the profession I hope it will be corrective in its tendency.

In the first place, then, desiccated blood is not controlled, either in manufacture or sale, by trade-mark, trade-mark name, or patent, but appears simply under its scientific Latin name, "Sanguis Bovinus Exsiccatus." In the second place, there is no secret whatever in its manufacture; anybody, by selecting a first class steer and sticking him over the heart, so that he may bleed to death, and not die of apnœa, can obtain the same blood used by Dr. Craven, at the Jersey City Stock Yards, taken from the choice picked steers for European exportation. By stirring this blood with sticks, and removing the small amount of adhering fibrin, it can be prevented from clotting. If, now, it be dried at a temperature of 110° F. and quick enough to prevent decomposition, a product equal in every respect to that made for me at the Central Stock Yards and Transit Company, of Jersey City, can be secured. In the third place, I have never allowed an advertisement to appear on the subject of Sanguis Bovinus Exsiccatus, which did not contain the truth, the whole truth, and nothing but the truth, as far as it was possible at the time to obtain it. In the fourth place, knowing that the publication of only one side of the question, must, of necessity, be misleading, I devised a plan of presenting it to the hospitals all over the United States, to be followed by their official reports, founded on thorough scientific tests. In the fifth place, defibrinated blood had been used in more than 100 cases, and good results obtained, before a single advertisement appeared, or I felt justified in presenting it publicly to the profession. In the sixth place, I placed the sale of this article, as prepared by Dr. Craven, in the hands of a house who have backed me in my position in every particular. And furthermore, if Dr. Craven has contracted to furnish blood prepared by him to no other house, it is but to protect his own reputation and the quality of the article; he cannot control the sale, except on quality; all of which is perfectly legitimate. And in the seventh place, as quality can only be obtained by care and skill, when any other house can present to the profession Sanguis Bovinus Exsiccatus prepared with as much care and skill as exercised by Dr. Craven, and handle it with as much enterprise and ability as Messrs. Parke, Davis & Co., of Detroit, I will with pleasure commend their enterprise.

Finally, then, I respectfully request the profession not to wait until a new remedy becomes official in the U. S. P. before using it, but to thoroughly test all such remedies carefully, in numerous cases, in the hospitals and dispensaries, so that when they are presented for acceptance to the Pharmacopœia committee, at the next revision, there may be furnished concurrently, with every new drug, reliable information concerning it.—*Med. and Surg. Rep.*, Nov. 27.

SEPTICS AND ANTISEPTICS.

The following incident was related by Dr. W. H. Hingston, Professor of Surgery in the Montreal Medical College, in a recent address:—

A strong impression as to the little value of the antiseptic in recent wounds was made on my mind on the occasion of my last visit to Europe. Syme and Simpson, Edinburgh's greatest teachers, were living at the time. The latter invited me to be present when he removed a breast. Before the operation was begun, he said to me: "Come every day, and see how this case gets on—I promise you there will not be one drop of pus?" I am free to admit I thought the promise a bold one. I visited the case till union was complete; and, as had been promised, "not one drop of pus" was formed. At about the same time I saw Mr. Syme perform on the toot the operation which bears his name. It is needless to say it was well done, and with antiseptic precautions. But before the integument was sutured, it was perforated at the most dependent part, and a piece of lint, soaked in carbolic acid and linseed oil, was put through it. I ventured to ask Mr. Syme what that was for. "To permit the escape of pus," was the reply. "Then you expect pus, Mr. Syme?" "Certainly," was the answer. This promise also was fulfilled, and pus did form. Their two modes of operating impressed me strongly, but not in the same manner. Simpson's method, as on the occasion referred to, has influenced my practice ever since.—*Medical and Surgical Reporter*, Nov. 27th, 1880.

IS MEDICINE A SCIENCE OR AN ART?

The above question may seem one that has been answered. Few young men in the profession but fondly believe that it is a science, or if it is not one just yet, it is in a rapid gait and on the high road to become one.

Certain it is that it is becoming rapidly surrounded with all the paraphernalia of science. We have a medical chemistry, medical physics, medical mechanics, medical mathematics; the student must devote years to questions of optics, analysis, acoustics; he must provide himself with thermometers, reagents, and 'scopes and 'meters without number; he is diligently taught that "instruments of precision" are his indispensable aids; and if he is bright and ambitious, he studies diseases profoundly—in the pathological room—and remedies thoroughly—in the physiological laboratory.

Yet in spite of this brilliant array of resources there are here and there some voices—rather timid and feeble ones, perhaps, but audible—which are raised against this tremendous cram. These mediæval-minded doctors do not seem to think that the chief end of medicine is diagnosis; they apparently pretend that we can learn more by watching the effects of medicine

when administered to sick men than to healthy dogs; and they talk as if a student could spend his time better by the bedside of a patient than with his microscope over prepared slides.

Of course, the enlightened editor can have no sympathy with these obscuratists, who would sink the noble science of medicine down to the level of a healing art, but he still recognizes it as his duty to chronicle their existence; and lest his mere statements should be doubted, he will feel it incumbent to "name names."

One of these doubting Thomases is Dr. Matthew Charteris, Professor of Materia Medica at the Glasgow University. He deflects so far from the recognized standard of science as to say, in a recent address—

"Clinical experience shows how few symptoms or signs are in reality significant of any one particular disease, and how slowly but surely the art of healing will be consolidated, *not by physiological experiment or laboratory dreams*, but by carefully recorded facts and well authenticated recoveries, when the proper remedies have been judiciously chosen."

This is full of heresy. What! If the symptoms and signs are not significant, where's the diagnosis to come from? To be sure, Prof. Charteris replies, from personal bedside observation. But then the reagents, the 'scopes and the 'meters, they seem to be put secondary and in the shade, by this way of reasoning. Then that hit at "laboratory dreams" is really cruel to "scientific workers," who just now have so many "provings" to report in the journals.

The painful confession must further be made, that Prof. Charteris does not stand alone as a skeptic of the modern methods. Last year a professor of the ancient school of Montpellier, Dr. J. Quissac, published in Paris a treatise, entitled *Théapeutique Médicale*, a respectably big book. He is an out-and-out doubter. He talks thus in the preface:—

"Medicine is being removed further and further from the bases on which it should rest, and apart from which it cannot exist.

"Many a time a single symptom furnished by physical or chemical exploration is taken as a sufficient indication for remedies.

"What wonder, therefore, that the therapeutics of the day is little more than a field for experiment, and that a remedy good to-day will be worth nothing to morrow. * * *

"It is not in the laboratories, no matter how well furnished, that we shall find the elements necessary to determine morbid conditions.

"As for the physical and chemical means, the microscope, the thermometer, the hematimeter, the sphygmograph, reagents, etc., etc., which fill so important a place in modern medicine, although we recognize their high value as scientific instruments, we consider them very feeble auxiliaries—indeed, often

deceptive and dangerous—when we enter the domain of practical medicine."

Thus the professor of Montpellier; and in this spirit he teaches at the ancient University.

There seems, in truth, a growing disappointment at the practical benefits derived from the enormous multiplication of "instruments of precision" during the last thirty years. Nowhere have they been more sedulously cultivated than in Germany; but one has only to examine the records of German hospitals, or to glance at the confused and conflicting therapeutical paragraphs in *Ziemssen's Cyclopædia*, to satisfy himself that clinical medicine has positively retrograded there since the days of Niemeyer—the last and greatest of Germany's real physicians.

Again, the feverish impatience with which every new remedy is run after by the profession, only to be tried, written about for a few months, and then thrown aside as a child does its toy, indicates surely that the old and standard remedies are too little known from their clinical side, and that, as Quissac says, the custom of seeking drugs to meet single indications, administering them on principles derived from physiological tests, is an utterly mistaken one.—*Med. and Surg. Rep.*, Nov. 27.

COD-LIVER OIL IN EPILEPSY.

Dr. Fairbarin, of Brooklyn, N. Y., writes: The digestive disorder and annoying and disfiguring eruption which result from taking the bromides in large doses for a length of time, are serious disadvantages connected with the administration of these salts. A remedy which will prevent the bad effects of a medicine, and at the same time will rather aid than detract from its good effects is certainly a valuable one. I think in this case we have such a remedy in cod-liver oil.

A young lady suffering from epilepsy has been under my care for the past five months, who has taken bromide of potassium in large doses for nearly a year, and by this remedy cod-liver oil has warded off the above troublesome results. The mode of taking it was this: Brom. potas., 3 ss., was taken thrice daily after eating; this was followed one hour after each dose by ol. morrhuæ, ℥ ss. When first attacked by the malady she had eight convulsions in the twenty-four hours. She began the bromide in 3 ss. doses, but was compelled to stop it on account of the gastric derangement. A friend recommended the cod-liver oil. She resumed the bromide, adding the oil, and has taken it without further trouble since. The eruption, before profuse, disappeared under this management. The disease has been well controlled, only four convulsions having occurred in the past seven months. I doubt not that the cod-liver oil has had its share in the direct benefit done to the nervous system, besides affording a protection from the irratating salt to the coats of the stomoch. In summing up the good

effects of the oil I find: *First.*—Absence of the digestive disorders. *Second.*—Absence of the acne eruption. *Third.*—That the anæmia, usually found in persons taking this medicine continually, is far from being marked. *Fourth.*—The body is better nourished, and appetite unimpaired. I have made trial of this treatment in other cases, with similar good results. As the articles that have appeared in your journal, in the past month, on the bromides, have made no mention of this device, I have been led to write the above.—*N. Y. Med. Record*, Dec. 11.

MALIGNANT CHARBON.

The Academy of Medicine of Paris is at the present time, as we may learn from an interesting article in *le Concours Médical*, engaged in the discussion of 'le Charbon,' that infectious disease, oftenest seen in sheep, and which has attracted so much interest of late years through the experiments and researches of Pasteur, Colin, Bouley and other French savants.

This malady attracts great attention in France, for it destroys great numbers of sheep in certain parts of that country, particularly in 'La Beauce,' and there is one form in particular, located near Senlis, on which every animal introduced, even if kept entirely apart from the others, will be attacked with the disease; the temperature rises to 41°–42°, the glands become inflamed and suppurate, death generally ensues, and at the autopsy the blood is found filled with bacteria.

How infection occurred in such a case has long been a disputed question, which has lately received a very probable solution, through the researches of that great savant in such matters, M. Pasteur; he asserts that the germs or bacteria of this disease are transported from the depths at which diseased animals are buried, by the earth worm which feeds on their carcasses, and he has demonstrated the presence of such bacteria in the excrements of the worms found on the surface, where the sheep in feeding would readily absorb them.

Some very interesting experiments have been lately reported to the Academy by M. Toussaint; he inoculated sheep with the serum of the blood of diseased animals, deprived, as he thought, of bacteria; he announced that, after an attack milder than the usual disease, this vaccination gave immunity against further attacks.

M. Bouley has repeated the experiments at Alfort, on twenty sheep; four died, and numberless bacteria were found in their blood; the others were gravely attacked, but recovered. In order to test M. Toussaint's assertion, that each inoculation gave immunity against the disease, these sheep were inoculated from the blood of a rabbit dead after inoculation with virus of le charbon; the only result observed was a slight rise in the temperature, with some general malaise, showing that the virus had still some slight effect; this same effect somewhat more

marked, for the glands were swollen, was remarked by M. Chauveau after inoculation of some Algerian sheep, who do not generally suffer from the disease when exposed to it; he remarked also that repeated inoculation gave almost entire immunity from evil effects.

Have these facts any bearing on vaccination on the human subject? They would seem to show, as M. Bouley observes, that repeated vaccinations at short intervals, and with a greater number of points of inoculation, might prove successful when one vaccination did not.

But M. Toussaint's procees really resembles the direct inoculation of the virus of the small-pox, as had been practiced by the Chinese for the last ten thousand years in the human subject.

In the second half of the last century, when the direct inoculation was common in the north and centre of Europe, Gatti-Pina, one of the great upholders of this practice, noticed that in 95 out of 100 cases direct inoculation could be made a second time without effect, showing that just as M. Toussaint has found to be the case in animals, for the charbon, so in man, inoculation, even with small-pox virus, would have to be repeated to confer perfect immunity against the disease.—*Medical and Surgical Reporter*, Nov. 27th, 1880.

THE SPECIFIC GERM OF MALARIA.

Dr Lauchlan Aitken of Rome writes to us: "The proof of the existence of a specific malarial germ has just received important confirmation. At the Italian Medical Congress held in September at Genoa, Dr. Marchiafava, assistant to the Professor of Pathological Anatomy at Rome, announced that he had found the bacillus malariæ in the blood of three patients during the cold stage of the malarial fever from which they suffered. Since that time, twenty-four cases have been examined, with the result, in every instance, of showing the presence of the bacillus in the blood during the period of invasion, while the spores alone could be seen when the fever was at its height. The same careful observer, as long ago as last autumn, had found the rode and spores of the bacillus in the lymph, blood, spleen, and medullary cavities of bones at the *post mortem* examinations of three persons who had died from pernicious fever, but no one had hitherto succeeded in demonstrating the presence of the bacillus in the blood of living patients, owing to the specimens examined having been always taken during the hot stage of the fever. Professor Perroncito of Turin (one of the leading mycologists of Italy), has repeated Dr. Marchiafava's observations in the Hospital of Vercelli, in Piedmont, which annually receives about four thousand cases of malarial fever, though not of a pernicious type, from the surrounding district, which is covered with rice fields. The result

is that he, too, has found the bacillus, occasionally in large quantity, in the blood, during the cold stage of all the cases examined, and sometimes also in the last hours of the intermittent period. I saw, to-day, at the Santo Spirito Hospital, a specimen of blood within five minutes from the time when it had been taken, with all due precautions, from a patient just entering on the stage, which contained two or three bacilli in all repects identical with those exhibited at Cambridge, got, it may be recollected, by the cultivation of some mud from near Selinunte, a very malarial port in Sicily. Observations are now to be made, both at Rome and Vercelli, according to a common programme drawn up by Professor Tommasi Crudeli, of the blood of the spleen drawn off by aspiration through a hypodermic syringe during the last hours of the intermittent period, and also of the perspiration and urine during the stage of resolution. Professor Tommasi Crudeli hopes that British practitioners, who have many opportunities, both in India and the Colonies, will make similar researches, but cautions them that a good illumination is essential, and that it is useless to work with less than a one-eighth-inch object-glass.—*British Medical Journal*, November 6.

A CRUCIAL TEST OF HOMŒOPATHIC MEDICINES.

In the New York *Homœopathic Times* for March, 1880, is an account of a series of experiments instituted for the purpose of testing the effects of the thirtieth dilution of tincture of aconite. The project was set on foot in Milwaukee by a homœopathic society and carried out with great care. In the words of the originators, "the object of this test is to determine whether or not this preparation can produce any effect on the human organism, in health or disease." "A vial of pure sugar pellets, moist with the thirtieth Hahnemanian dilution of aconite, and nine similar vials moistened with pure alcohol, so as to make them resemble the test pellets," were given to the prover, who was not to know which of the ten vials contained the aconite. The vials were numbered from 1 to 10, and the prover was to administer them to individuals, sick or well, and to detect by the effects which of the vials contained the medicine. It was provided that "the provers must be physicians of decided ability, who possess a good knowledge of the recorded symptomatology of aconite, and who have faith in the efficacy of the thirtieth dilution." The project was widely announced, and the ten vial package was sent to each of twenty-five homœopathic physicians applying for them, scattered over a dozen different States. To guard against all possible fraud or trickery the Rev. Geo. T. Ladd, Professor of Mental and Moral Philosophy in Bowdoin College, Maine, was selected to

distribute the vials to applicants and to receive reports from them.

Now, all this was not only decidedly fair, but it was highly creditable to those who ventured on an experiment involving so much peril to a favorite theory. One looks to the result with much interest. The result, so far as it has transpired, appears in the report of Mr. Ladd, which was not made until after the date allowed for the returns from the provers. By his report it appears that only nine of those gentlemen ventured on any answer whatever. Mr. Ladd's report is thus summarized in the general report made to the Milwaukee Academy of Medicine—the body which originated the project—and signed by Samuel Potter, M. D., President, and Eugene F. Storke, M. D., Secretary:

Number of tests applied for and sent out.....25
Number of tests which have been reported on..... 6
Number of tests in which the medicated vial was found.... 0

Be it remembered that these statements do not come from the opponents of homœopathy, but from its own adherents, and not from a local or partial source, but from a select body representing the more intelligent portion of the sect. We have never met with any evidence more damaging to homœpathy. True, the blow strikes only at the infinitesimal phase of the system, and not at the dogma of similia similibus; but it is also true that the head and front of homœopathy is the unphilosophical unscientific and absurd doctrine of potentization, and not the theory implied by its title.

We have observed no notice of this report except in the journal named. It would appear that a general effort has been made to suppress it. In the meeting of the New York State Homœpathic Society, lately held at Albany, the report was refused acceptance. The editor of the *Times* complains of this, saying that common courtesy required its reception, though its adoption might have been refused. We do not wonder, however, at this course. The pill was altogether too bitter for homœpathic stomachs.—*Canada Journal Medical Science.—N. C. Med. Jour.*, Nov.

THE PREPUCE.

The earliest Scriptural account of the prepuce is where the Lord convenanted with Abraham that the children of Israel should be circumcised. But the rite is practiced among several religious peoples at the present time. To-day in Stamboul and Timbucktoo the cry may be heard, "who wants be cut," the meaning of which is that the cryer is a person who thus advertisers his calling or vocation,—who, in short, is a practical circumciser of foreskin. The Arabs have their young daughters circumcised, a fold of the inner labia being ex-

cised, but our Israelitish faiends only sacrifice the prepuce of baby boys.

In a letter just received from a friend in New Zealand I learn that the native males, after puberty, have the prepuce tied in front of the glans with a string. If a man be discovered with his glans penis bare, he would be looked upon with contempt, and a fit subject for derision. All males who expose themselves while bathing must have their prepuce fastened down. An uncovered glans is regarded as shameful, if not abominable, while it would not be immodest to disrobe before females, if the foreskin was tied down over the glans penis. Strange what contrasting importances are placed by different peoples to such inconsequential parts of their bodies! Crude religions are tainted with vulgarities and sexual absurdities.—*Cincinnati Lancet and Clinic*, October 30.

NERVE GRAFTING.

Dr. J. Gluck, of Bucharest, lately brought before the Ninth Congress of the German Society of Surgery, at Berlin, some interesting results of experiments in nerve-grafting. He cut out a portion of the sciatic nerve of a fowl, and then removed a similar portion of the same nerve from the leg of a rabbit, and placed this in the leg of the fowl, uniting the two ends by sutures. The nerve united, and the paralysis caused, of course, by the excision of the piece of nerve was recovered from. He repeated the experiment, and exhibited the successful results, showing the fowls with full restoration of power. He was led to these experiments by the result of a case of nerve suture. Paralysis of the median had resulted from an extensive destruction of the tissue of the arm by gangrene. Dr. Gluck cut down on the radial nerve and found that part of the nerve destroyed. He united the two ends by sutures, and the man regained the power of motion, which he had entirely lost. Of course, the experiments in nerve-grafting in animals do not warrant the expectation that a similar result could be obtained in the case of the human subject. It is well known that the union and regeneration of nerves occur with greater facility in the case of the lower animals than in man.—*Med. and Surg. Rep.*, Oct. 30.

Hahnemann, the founder of the homœpathic school, was one day consulted by a wealthy English lord. The doctor listened patiently to the patient. He took a small phial, opened it, and held it under his lordship's nose. "Smell! Well, you are cured." The lord asked, in surprise, "How much do I owe?" "A thousand francs," was the reply. The lord immediately pulled out a bank note and held it under the doctor's nose. "Smell! Well, you are paid."—*Exchange.*

Editorial Department.

1881.

According to Mother Shipton, at some unstated period during the newly born year, all earthly objects, pursuits, hopes and projects, are to be placarded with the startling word "Finis,"—an inscription pleasant to very few except the book maker and play writer. Even some of our contemporaries have become possessed of the mantle and spirit of prophecy, and tell us of the baleful influences which unusual planetary conjunctions are on the point of exercising over the unfortunate little sphere where our lots have been cast. Other seers who seek to forecast the future more acurately by predicating its disclosures upon alleged actual occurences tell us of those huge melanotic blotches on the sun's disk, which are soon to coalesce and shut out forever the entire face of the god of day. In spite of all these woeful presages, we venture to offer our readers the usual compliments of the season, and wish for each and every one, a happy, happy, and prosperous New Year. No doubt, 1881 will afford the same checkered history of all its predecessors: weal to many; woe to others. In the main, we trust our own profession will be found on the sunny-side of the grand posting of accounts at the end of the year, and then be able to repeat once more, the memorable expression of Portal: "The medical profession is as one man living always and always learning."

A MERITED COMPLIMENT.

At the late meeting of the American Public Health Association, Dr. C. B. White, of New Orleans, was elected President for 1881. He is one of the best and most earnest practical Sanitarians in this country and the compliment was well bestowed.

INTERNATIONAL SANITARY CONFERENCE.

The Secretary of State has appointed Dr. Cabell, Dr. Turner and Solicitor General Phillips, to represent the National Board

of Health in the International Sanitary Conference, which will shortly convene in Washington.

THE "HAMMOND PRIZE," OF THE AMERICAN NEUROLOGICAL ASSOCIATION.

The American Neurological Association offers a prize of five hundred dollars, to be known as the "WILLIAM A. HAMMOND PRIZE," and to be awarded at the meeting in June, 1882, to the author of the best essay on the *Function of the Thalamus in Man.*

The conditions under which this prize is to be awarded are as follows:

1. The prize is open to competitors of all nationalities.

2. The essays are to be based upon original observations and experiments on man and the lower animals.

3. The competing essays must be written in the English, French or German language: if in the last, the manuscript is to be in the Italian handwriting.

4. Essays are to be sent (postage prepaid) to the Secretary of the Prize Committee, Dr. E. C. SEGUIN, 41 West 20th Street, New York City, on or before February 1, 1882; each essay to be marked by a distinctive device or motto, and accompanied by a sealed envelope bearing the same device or motto, and containing the author's visiting card.

5. The successful essay will be the property of the Association, which will assume the care of its publication.

6. Any intimation tending to reveal the authorship of any of the essays submitted, whether directly or indirectly conveyed to the Committee or to any member thereof, shall exclude the essay from competition.

7. The award of the prize will be announced by the undersigned Committee; and will be publicly declared by the President of the Association at the meeting in June, 1882.

8. The amount of the prize will be given to the successful competitor in gold coin of the United States, or, if he prefer it, in the shape of a gold medal bearing a suitable device and inscription.

SIGNED, { F. T. MILES, M. D., *Baltimore,*
J. S. JEWEL, M. D., *Chicago,*
E. C. SEGUIN, M. D., *New York.*

THE NEW ORLEANS MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

The ninth meeting of this body, and the first in this city, was held at Grunewald Hall, Dec. 7–10, 1880. The association was called to order at 10, A. M., by the President, Dr. John S. Billings, U. S. A., and the proceedings opened with prayer by Rt. Rev. J, N. Galleher, Bishop of La.

Dr. L. F. Solomon, Chairman of the Committee of Arrangements for this meeting, announced that the invitation of Hon. H. P. Kernochan to visit his plantation on the lower coast, had been accepted, and the time fixed for the excursion was Saturday, 11th inst., starting at 10, A. M.

The report of the Treasurer, Dr. J. Berrien Lindsley, showed receipts during the year, including balance on hand at last report, to be $3622.96, and disbursements $2917.56, leaving a balance of $705.40.

The first paper read was by Dr. G. Devron, of New Orleans, on Abattoirs. He first touched upon the history of these establishments, from the time of the Romans to the present, and then gave a history and description of the Abattoir of New Orleans.

He was followed by Dr. Bushrod W. James, of Philadelphia, in a paper on a kindred subject—How Abattoirs improve the Sanitary Condition of Cities. Additional advantages in moral and economical respects were also pointed out.

Dr. Jos. R. Smith, U. S. A., then read a paper on Texas Cattle Fever. His conclusion is as follows: "No epidemic disease prevails among the Texas-bred cattle living and grazing in that State, but that imported cattle, soon after their arrival, are affected by a disease called Texas or Spanish fever, which is very fatal to them alone." In the course of the discussion of the paper, it was stated by Dr. Elisha Harris, that, although the Texas cattle do not themselves manifest the disease in question, their appearance in other sections, when driven to market, is followed by an outbreak of what is known as Texas Cattle Fever among native cattle; also that cattle crossing the trail of a drove of Texas beeves contract the disease.

A paper on the Sanitary Association of Lynn, Mass., by Dr.

J. G. Pinkham, its Secretary, was read by Dr. E. M. Hunt. This association is similar in its objects to the Auxiliary Sanitary Association of New Orleans, and was organized about the same time, namely, April 8, 1879.

Dr. Devron followed in some remarks, in which he alluded to the latter organization Dr. W. G. Austin, of New Orleans, in this connection, called attention to the aid rendered by the National Board of Health in promoting the sanitation of New Orleans during the outbreak of yellow fever of 1879, and to which he attributed its limitation to less than 50 cases.

Dr. Albert L. Gihon, U. S. N., then read the Report of the Committee on a Plan for the Prevention of the Spread of Venereal Diseases, having been appointed chairman of a committee on this subject at the previous meeting. The report closes with the following: "*Resolved*, That the American Public Health Association earnestly recommends the municipal and State boards of health to urge upon the legislative bodies of this country the enactment of a law constituting it a criminal offense to knowingly communicate, directly or indirectly, or to be instrumental in communicating a contagious disease, such as small-pox, scarlet fever or the venereal diseases, and giving to the said boards of health and to the State and municipal health officials under their control, the same power in the prevention, detection, suppression and gratuitous treatment of venereal affections, which they now possess in the cases of small-pox or other contagious diseases." After discussion of the resolution by Drs. Hunt, Bell, Dake, Atchison, Wight and Hon. Erastus Brooks, it was adopted, with the omission of the words "municipal and State boards of health."

AFTER RECESS—the Association was called to order at 3 : 30 P. M., and the following resolution, by Dr. Gihon, were referred to the executive committee without debate:

Resolved, That all nominations of Officers of this Association shall, before being submitted to ballot, have the indorsement or approval of a majority of the members present from the State in which the candidate resides.

Resolved, That the executive committee be instructed to communicate with the State and municipal boards of health throughout the country, and supply them with a copy of the

report of the committee on the prevention of venereal diseases, and request their coöperation in the attainment of the object of the resolution submitted and adopted by the Association.

The following, by Dr. J. C. LeHardy, was disposed of in like manner:

Be it resolved, That the order of business be so amended, that all new business, all motions and resolutions referring to public health be introduced on the second day of the session of this Association, and that the discussion of all business so introduced shall take precedence of all other business upon the demand of any member.

Rseolved, That a standing committee on general sanitation, composed of one member from every State and territory, represented in the Association, be annually appointed by the executive committee, each member of which shall be required to make an annual report to the Association of the sanitary condition and requirements of his State or territory, the prevalent diseases and other matters of interest to the Association.

The Association was next addressed by Col. Geo. E. Waring, Jr., of Newport, R. I., on the Storm-water Question in Relation to Sewerage. He took the ground now occupied by the best sanitarians, that storm-waters should be excluded from underground sewers, and be carried off by the surface gutters.

Col. Robert Moore, Sewer Commissioner of St. Louis, was not on hand to read his expected paper on the same subject.

Dr. J. W. Compton, of Evansville, Ind., was to have read a paper on Typho-malarial and Typhoid Fevers as aggravated by Sewer Gas; but he too was absent.

Prof. Brewer, of New Haven, then read, by invitation, a paper On the Action of Muddy Water on Sewage.

Dr. Walcott, of Mass., read a paper by Dr. Joseph Crane, Health Commissioner of Brooklyn, on The Prevention of Certain Contagious Diseases by Local Boards of Health. The writer made reference chiefly to measures for securing prompt reports of contagious diseases to the health authorities, to measures of isolation of the sick, and to measures of disinfection after termination of the cases.

At the Evening Session the Association assembled at 7½ o'clock. First came an address of welcome by Gov. Louis A. Wiltz, on the part of the State, followed by one from Mayor

I. W. Patton, on the part of the city. Dr. J. P. Davidson, First Vice-President of the Louisiana State Medical Society, next spoke in behalf of that body.

The President of the Association Dr. John S. Billings, then pronounced the usual annual address. Some of the more important points of this address were the desirability that sanitarians should devote all their energies to preventive medicine, the unfortunate impracticability of obtaining permanent occupation and support apart from the practice of curative medicine, and the practical superiority of a single health officer to a board of health in effective work. The actual state of public sanitation in these respects indicates grave deficiences in prevailing systems of sanitation, which may be reformed gradually, and perhaps attain perfection in the distant future. But people must first learn and allow that prevention of disease is at least as much entitled to reward as its cure.

THE SECOND DAY'S SESSION, Dec. 8, commenced at 10:15 A. M.

The Executive Committee reported unfavorably on the resolution offered yesterday by Dr. Gihon on nominations; also on the resolutions of Dr. Le Hardy, relative to change in the order of business, and the creation of a standing committee on general sanitation.

They recommended the following:

Ordered, That the standing rule adopted at the last meeting for the creation of an advisory committee be continued; that it shall be hereafter known as the advisory council, to consist of one member from each State, one each from the army, navy and marine hospital service, the commissioner of education; and that, in addition to the duties heretofore performed by the advisory committee, it shall act as a nominating committee for this Association.

Adopted.

The following, offered yesterday by Dr. Gihon, was reported back without recommendation:

Resolved, That the executive committee be instructed to communicate with the State and municipal boards of health throughout the country, and supply them with a copy of the report of the committee on prevention of venereal diseases, and request

their coöperation in the attainment of the object of the resolution submitted and adopted by the Association.

The resolution was supported by remarks from Drs. Gihon, Bell and Ames, and opposed by Rev. Dr. Wines, of Illinois, Dr. Hunt, of N. J., Dr. Chamberlain and Prof. Brewer, of Conn.; and on the vote was carried by 93 yeas to 28 nays.

The following, by Dr. McCormack, of Ky., was referred to the executive committee:

Resolved, That a committee of five be appointed by the president, to take under consideration the advisability of establishing a national museum of hygiene, the said committee to report at the next annual meeting of the association.

The same disposition was made of the following by Dr. C. W. Chancellor, of Md.

Resolved, by the American Public Health Association, That for the better protection of the public health, the Legislatures of the several States be and they are hereby invoked to enact measures imposing a severe penalty against any person who, while suffering from any dangerous, contagious or infectious disorder, willfully exposes himself without proper precautions against spreding the said disorder in any street, shop, public place or public conveyance, without previously notifying the owner, conductor or driver thereof, that he is so suffering; or any person who, being in charge of any one so suffering, shall willfully and knowingly expose such sufferer, or any parent or guardian who shall willfully and knowingly permit their child or children to attend any public school during the existence of such disease in the family; or any person who gives, lends, sells, transmits or exposes without previous and thorough disinfection, any bedding, clothing, rags or other things which have been exposed to infection from any such disorder; or any owner or driver of a public conveyance who shall not have immediately provided for the disinfection of such conveyance after it has to his knowledge conveyed any person suffering from a dangerous contagious or infectious disorder, or the body of any person who has died from such disease; or the owner of any house in which any person has been recently suffering from a contagious or infectious disease, who knowingly lets it or any part of it without having previously disinfected it, and articles therein liable to retain infection, to the satisfaction of the constituted health authorities, where such authorities exist, or, in the absence of any such authorities to the satisfaction, stated under certificate, of a legally qualified medical man; or any perron who, offering fot sale or rent any house or part of a house, shall make a false statement as to the existence of any contagious or infectious disease therein at the time or within the period of two months prior thereto.

Resolved, That the executive committee of the National Board of Health be requested to have prepared a project of a law embodying the substance of the foregoing resolution, and that the president of this association be directed to transmit the same, together with a certified copy of the resolution, to the Governors of the several States, with an official request that they will, as soon as practicable, lay the matter in due form before the Legislatures of their respective States.

The following, by Maj. Walthall, of Mobile, was adopted:

Resolved, That a committee of five members be appoinred to prepare and recommend measures for the more efficient management and control of future epidemics, especially for the training, selection and employment of skillful and trustworthy nurses.

Dr. Billings then read the report of the Advisory Committee on National Sanitary Legislation. A large majority of the committee favored an increase of the scope of special scientific investigations already undertaken by the National Board, and the appropriation of the necessary funds by Congress. Only two favor increase of quarantine powers to be exercised by the Board. Appendices to the report contain the text of bills offered at the last session of Congress by Messrs. Acklen of La. and Harris of Tenn., to increase the powers of the National Board; also the memorial of the State Board of Health of Ala., opposing such increase.

Dr. G. B. Thornton, of Memphis, read a paper on the Sanitation of Memphis, giving a description of the new sanitary works in that city and the text of the ordinances regulating and enforcing their use. Also the policy of the sanitary authorities of Memphis was defined, particularly with reference to New Orleans, which is credited with communicating yellow fever to Memphis in every visitation except that of 1879.

Col. Waring then described the present mode of sewerage in use at Memphis.

Dr. Bell next read the paper of Col. Moore, Sewer Commissioner of St. Louis, on storm water and house drainage in sewers. His conclusion is that, where there is convenient and effectual outfall, it is expedient to carry off sewerage and storm-waters together; otherwise they should be kept separate.

Col. Waring, on this subject, remarked that the system of Memphis is the one best suited to New Orleans. For want of suitable grade from front to rear of the latter city, the main sewer should run through Rampart street, midway between the front and rear, and sewers from both directions flow to it. This would necessitate an artificial gradient from the rear to Rampart street. It would be necessary to make the flush-tanks considerably larger than those of Memphis, but the same plan would be applicable in its general features.

AFTER RECESS.—At 3, p. m., on Wednesday, Dr. Devron read the paper of Col. J. M. Keating, of Memphis, on The Value of Sanitation from an Economic Standpoint.

The following is a recapitulation of the principal topics:

First—The money value of population.

Second—The effects of epidemic and other preventable diseases in robbing nations of population, and, therefore, of productive capital.

Third—The beneficent results of sanitation in preventing or mitigating effects of epidemic and other preventable diseases; in saving population, and, therefore, a vast amount of productive capital, thus exemplifying the value of sanitation from an economic standpoint.

Fourth—I have endeavored to express the inestimable services of the National Board of Health in its vigilant watchfulness against the introduction or spread of yellow fever, exemplifying the value of the "ounce of prevention," and the economy exercised by the government in organizing and providing for that body And in this connection I beg leave to suggest that this association recommend to the national government the continuance of the National Board of Health will greatly increased powers.

The Sanitary urgency of the Florida Ship Canal is the title of Prof. Jno. Gamgee's paper, which was then read by Mr. Edward Fenner, of New Orleans. Taken in connection with Prof. Gamgee's theory of the origin of yellow fever in the tropical waters of the ocean, the sanitary advantage of the proposed ship canal consists in avoiding the warm waters of the Gulf of Mexico in reaching the mouth of the Mississippi from the Atlantic States and from Europe.

The paper of Dr. T. J, Turner, U. S. N., on Sanitation of Emigrant Ships, was read by Dr. Gihon.

On the subject of Dengue, papers were read by Dr. D. C. Holliday, of New Orleans, and Dr. J. G. Thomas, of Savannah. Papers on the same subject by Drs. Horlbeck and T. Peyre Porcher, of Charleston, were referred to the publication committee without reading.

SECOND DAY; NIGHT SESSION, 7:40, P. M.

Dr. E. M. Hunt, of N. J., read a paper on Our Present and Our Needed Knowledge of Epidemics, closing with the following propositions:

I. Communicable diseases are owing to a contagium which is particulate. The contagium is not the same as to its modes of facility of conveyance in all cases or in all diseases.

II. Therefore some communicable diseases are only acquired by contact, some by the suspension of the infective particle in air or water, some by changes in the secretions or excretions after they have been sometime in contact with the air, the surface or after voidance from the body. Whether a contagion has any one or any two or more of these modes of ingress is a matter to be determined only by the classification of closely observed facts.

III. Some contagiums have only an origin external to the body, while others have an origin only within the body. In either case they seem to be connected with decompositions attended with extraordinary processes of a fermenative or putrefactive character. It is also possible that some diseases have an origin both within and without the human body.

IV. The development of most of the zymotic diseases is coincident with

the presence of specific microzymes. Whether they are the causes of the changes occurrent or mere incidentals, and whether by changes they cause, or the food or air they appropriate or the mechanical clogging they make in vital parts, they make the crisis, if a disease is to be gravely suspected but is not yet investigated so as to be accepted as proven.

V. If, as appears, the presence of special forms is diagnostic of certain diseases, they are to be studied specifically as a means of diagnosis, as well as in their special relations to the disease in hand.

VI. Whether any disease which is known to be derived from authenticated cases is in some instaaces also developed by extraordinary processes within the body or in its surroundings, can only be made certain by a series of definite and classified facts accurately observed and recorded.

VII. Whether new epidemics arise from new combinations of matter incident to modern civilization, or whether there are hybrids in disease as well as in plant life, can only be determined in the same way.

VIII. There is a very hopeful study in preventive art in the direction of finding out whether we may not by preliminary treatment and a presence in the system of medicaments resistful of such fermentation and inimical to the development of these microzymes or destructive of them in their changing state, suspend the morbid processes attempted to be instituted, any so prevent development of disease.

IX. As there is so much difference in the way in which the same contagion affects different persons, we have reason closely to study the bearing of individual conditions on the acquirement and development of contagions, so as to know why some escape attack and others are susceptible.

Hon. John Eaton, Commissioner of Education, then followed with a paper on Sanitation and Education.

Dr. Elisha Harris gave a synopsis of a paper prepared by him on A Medical View of the Domestic Pestilences, with reference to the Sanitary Warfare against them.

Dec. 9th. Third Day.—Morning Session, 10, A. M.

Invitations were received from Memphis, Washington, Evansville and Savannah, Ga., for the American Public Health Association to meet in their respective cities. The advisory committee recommended that Savannah be selected for the annual assembling of this convention in November next.

By Dr. Elisha Harris, of New York.—

Resolved, That, in the judgment of the American Public Health Association the example of the local sanitary association of the city of Lynn, Massachusetts, as presented in this meeting by Dr. Pinkham, of that city, and as known by its works and publications, commends itself for immitation in all cities and villages.

Resolved, That, in view of the great practical importance of local sanitary associations, in cities and villages, the A. P. H. A. earnestly recommends that a well-organized local association to promote the interests of hygiene—domestic, personal and public—should be maintained in all populous communities; and further, that such local organizations should be effectual promoters of sanitary knowlege and improvement, and the faithful support of local sanitary authorities.

The executive committee recommend that same do pass. So ordered.

The executive committee offered a substitute for the resolution submitted by Dr. McCormack, of Kentucky, yesterday.

Resolved, That the executive and advisory committees be requested to take under consideration the advisability of establishing a national museum of hygiene, and to report at the next annual meeting of the Association.

The advisory committee offered the following:

NEW ORLEANS, La., December 8, 1880.

REPORT OF THE ADVISORY COUNCIL, ACTING AS NOMINATING COMMITTEE, A. P. H. A.

Mr. President.—I have the honor to report in behalf of the advisory council of this association, charged by its order with the duties of a nominating committe and of reporting at this hour, that the council having assembled, there being present sixteen members, the honorable Commissioner of Education and representatives of the States of Alabama, Illinois, Louisiana, Maryland, Massachusetts, Rhode Island, Michigan, West Virginia, New York, North Carolina, Connecticut, Wisconsin, Iowa, Kentucky and the United States Navy; and having organized by the choice of Hon. Jno. Eaton, Commissioner of Education, as chairman and Dr. John H. Rauch, of Illinois, as Secretary, unanimously agreed upon and now present the following list of nominees for the several offices of the Association for the ensuing year.

For President—Dr. Chas. B. White, of New Orleans, La.
For First Vice-President—Prof. R. C. Kedzie, of Lansing, Mich.
For Second Vice-President—Prof. Henry F. Campbell, of Augusta, Ga.
For Secretary—Dr. Azel Ames, Jr., of Wakefield, Mass.
For Treasurer—Dr. J. Berrien Lindsley, of Nashville, Tenn.
For Members of the Executive Committee—Dr. D. C Holliday, of New Orleans, La.; Dr. E. M. Hunt, of Metuchen, N. J.; Dr. Geo. M. Sternberg, of the United States Army; Dr. E. L. Griffin, of Fond du Lac, Wis.; Dr. J. G. Thomas, of Savannah, Ga.; Dr. Thomas F. Wood, of Wilmington, N. C.

Respectfully submitted,

JOHN H. RAUCH, Secretary.

The report was accepted and adopted, and Secretary Janes directed to cast a ballot for the association for each of the officers and committee nominated,

Dr. H. B. Baker, of Michigan, read a paper on The Relations of Schools to Diphtheria and Similar Diseases. The following were the principal topics treated: Is Diphtheria a filth disease? (Answer, negative); The Importance of Statistical Evidence; Periodical rise and decline of Diphtheria in a series of years; How Diphtheria may be spread in schools; Diphtheria in Lynn, Mass., in 1876; How can the schools go on without disseminating Diphtheria? Sanitary inspectors of schools.

The next paper was read by Dr. O. W. Wight, on the management of Contagious and Infectious Diseases in Milwaukee.

This was followed by Dr. T. S. Scales, on Municipal Sanitation as practiced in Mobile for preventing the Spread of Yellow Fever.

The paper of Dr. O. C. DeWolf, Health Commissioner of Chicago, on the Results of Attempting to Check the Spread of Smallpox in Chicago, was read by Dr. J. M. Hall, of Chicago

Dr. D. C. Holliday then read the report of a committee of the New Orleans Medical and Surgical Association on questions relating to prevention of the spread of diphtheria, scarlet fever, yellow fever, measles, small-pox, etc., the same hav-

iug been submitted in a circular by the Executive Committee of the A. P. H. A.

Dr. A. N. Bell followed with a paper on the relations of certain Filth Diseases to Cold Weather.

Opportunity now being offered for remarks, Dr. Dake, of Nashville, spoke in favor of lay membership in boards of health.

Dr. Baker was not satisfied with the alleged relation of filth to pneumonia in Dr. Bell's paper.

Dr. Foote, of Illinois, did not assent to Dr. Bell's idea, that diphtheria is essentially a filth disease. In his opinion it is rather contagious, frequently communicated by drinking water, particularly from wells.

DECEMBER 9. AFTERNOON SESSION. 3:30, P. M.

On accouht of the session of the Quarantine Convention at this hour, the paper of Dr. J. H. Pope, on The Sanitary Condition of the Mexican Population of Western Texes in its Relation to Public Health, was merely read by title and referred to the Publication Committee.

EVENING SESSION—7:30, P. M.

Dr. James read a paper by Mr. James Gallatin, President of the Sanitary Reform Society of New York, on Tenement House Reform in the City of New York.

Dr. S. E. Chaillé, of New Orleans, followed with a paper on Considerations of the Objections urged by some Evolutionists against Sanitary Laws, Boards of Health, and Stamping out of certain Epidemic Diseases. Dr. Chaillé effectually controverted the earlier notions of Herbert Spencer, as enunciated thirty years ago in his Social Statics; and the recent doctrines of Dr. H. M. Lyman on acquired hereditary tolerance of contagia.

This session closed with a paper from Hon. Evastus Brooks, of New York, entitled: What the State owes the People, having reference to sanitary legislation and appropriations for sanitary uses.

FOURTH DAY. FRIDAY, DECEMBER 10. MORNING SESSION —10, A. M.

The following, from the advisory committee, was recommended for adoption by the executive committee:

RECOMMENDATIONS BY THE ADVISORY COUNCIL, A. P. H. A., SUBMITTED TO THE EXECUTIVE COMMITTEE, DEC. 8, 1880.

The undersigned committee having been appointed this day by the advisory council of the A. P. H. A., to present for consideration such action as shall be regarded expedient by this body as to certain points which appear highly important in the annual discourse of the president, Dr. Billings, respectfully submit the following:

Whereas, The statements by the president in his discourse clearly present the demands which sanitary science makes for a complete and reliable system of national registration of diseases and of the causes of death, and also show that such records and the sanitary surveys of places and premises are essential means of successful public health improvement, these recommendations and also those relating to local sanitary associations, are earnestly commended to the attention of all boards of health and to the people throughout the United States. With the design to promote these objects, the following resolutions are recommended for adoption:

Resolved, That the best interests of sanitary science and the public health service require that the faithful registration of vital statistics, and especially the correct notation and registry of causes of death, together with a public record of prevalent diseases, should be maintained throughout our country; also that wherever there are boards of health, such boards should require that the records of epidemics and other prevalent diseases, and of mortality shall be correctly made and registered.

Resolved, That the American Public Health Association recognizes and earnestly commends the efforts of the National Board of Health to secure a practical basis of uniformity for the notation and nomenclature of diseases and causes of mortality, and again* urges upon all State and local boards of health and upon other public authorities, the medical profession and all members of this association to do whatever they can to promote such uniformity and thoroughness; to have this subject under consideration for the purpose of reporting progress and plans relating thereto at the next annual meeting, and for co-operation with the National and State boards of health, and with the medical and statistical bodies that have this subject under consideration.

Resolved, That systematic sanitary surveys and inspections are essential aids to successful public health works and to the progress and application of sanitary science. Therefore this association would urge upon State and local authorities the importance of such sanitary surveys and the sanitary maps and records that pertain thereto, and also would recommend that the registry of prevalent diseases and of mortality be as frequently as practicable so co-ordinated therewith as to disclose the preventable causes which need to be removed.

Signed, on behalf of the advisory council, as its committee.

ELISHA HARRIS,
HENRY B. BAKER,
JAMES A. STUART.

Recommendation adopted.

The following committee was appointed. Dr. Elisha Harris, of New York; Dr. E. M. Snow, of Rhode Island; Dr. Ezra M. Hunt, of New Jersey.

Dr. Azel Ames, of Massachusetts, offered several proposed amendments to the constitution, which were laid over to the next annual meeting, under the constitution:

*See Transactions 1875 and 1877.

The following resolutions, by Dr. Hand, of Minnesota, were reported back by the executive committee:

Resolved, That in view of the fact that diphtheria, a disease more frequent than typhoid fever, more contagious than small pox, and more fatal than yellow fever, now prevails over nearly the whole of this country, it is the duty of this association to indicate some way of preventing its spread.

Resolved, That the contagiousness of diphtheria is now well established; and that the disease should, in all cases, be treated with the same vigorous isolation and quarantine that is everywhere enforced against small pox.

Resolved, That as we know little or nothing of the origin of diphtheria, we will request the National Board of Health to investigate the causes of this disease with the same thoroughness as it is excercising in the case of yellow fever.

The committee recommended that the first resolution be stricken out, and that the third be amended to read as follows: After the word "Health," in the second line, insert "to continue." Strike out all after the word "disease" in third line Recommendation adopted.

The Executive Committee reported as follows on the resolutions offered by Dr. James H. Letcher, of Henderson, Ky.: Strike out the first resolution.

The other resolutions to read as follows:

Whereas, there are annually occurring in our large centres of population and frequently in the provincial districts, numbers of cases of sickness and death from small-pox; and

Whereas, the only certain method of restricting and preventing this loathsome disease is by vaccination and revaccination; therefore be it

Resolved, That the American Public Health Association appoint a committee of five members, whose duty it shall be to take steps looking towards the enactment of a national law upon the important subject of compulsory vaccination.

Resolved, That the Boards of Health of the several States of the Union, or, where no State Boards of Health exist, the State medical societies, be requested to take the matter under immediate advisement, and direct the attention of the legal Boards of Health to the importance of seeing that all persons in their respective districts are properly protected by vaccination.

Recommendations adopted.

Dr. Henry B. Baker offered the following resolution:

Resolved, That 500 copies of the address before this Association by Hon. Erastus Brooks, of New York, on "What the State Owes the People," be printed in pamphlet form, and copies be sent to the Governors of States, together with a communication, respectfully asking them to consider the propriety of calling the attention of the legislative bodies in their States to the importance of action in the directions indicated in the paper.

Adopted.

The resolution offered by Dr. C. W. Chancellor, Secretary of the State Board of Health of Maryland, and reported back by the executive committee Thursday without action, were taken taken up and adopted.

The executive committee made the following report on the resolution offered by Dr. McCormack, of Kentucky: That it be amended to read as follows:

Resolved, That for the purpose of securing uniformity in legislation in the States of this Union for the prevention of venereal diseases, the committee for the prevention of venereal diseases be reconstituted and instructed to prepare drafts of a State law and of a municipal ordinance calculated to secure the desired results, and report at the next annual meeting of this Association.

Adopted.

The following gentlemen will compose the committee on prevention of venereal diseases: Albert L. Gihon, M.D., Medical Director U. S. Navy, chairman; J. M. Keller, M. D., Hot Springs, Ark.; Geo. M. Sternberg, M. D., Surgeon U. S. Army; D. C. Holliday, M. D., New Orleans, La.; Preston H. Bailhache, M. D., Surgeon U. S. Marine Hospital Service; John Morris, M. D., Baltimore, Md.

The President appointed the following as the committee authorized by the resolution offered by Mr. Walthall, of Mobile, and adopted Wednesday: W. T. Walthall, John Johnson, F. Peyere Porcher, G.A. Ketchum, and Hon. John Eaton.

On motion of Mr. Walthall, President Billings was added to the committee.

The following were announced as the advisory council for the ensuing year:

Alabama—R. D. Webb, M. D., Livingston.
Caliifornia—Henry Gibbons, M. D., San Francisco.
Florida—Hon. S. C. Cobb, Pemsacola.
Georgia—W. H. Elliott, Augusta.
Illinois—J. H. Rauch, M. D., Chicago.
Indiana—J. F. Hibberd, M. D, Richmond.
Mississippi—Wirt Johnston, M. D., Jackson.
Louisiana——Ed. Fenner, New Orleans.
Maryland—James A. Stuart, M. D., Baltimore.
Massachusetts—R. F. Davis, Wakefield.
Pennsylvania—Henry Hartshorn, M. D., Philadelphia.
Ohio— T. C. Minor, M. D, Cincinnati.
Missouri—George Homan, M. D.
Rhode Island—E. M. Snow, M. D., Providence.
Tennessee—John Johnson.
Virginia—J. G. Cabell, M. D., Richmond.
Michigan—Henry B. Baker, M. D., Lansing.
Iowa—W. S. Roberts, Davenport.
West Virginia—James E. Reese, M. D., Wheeling.
District of Columbia—Smith Townsbend, Washington.
New York—Elisha Harris, M. D., Albany.
North Carolina—Thomas F. Wood, M. D., Wilmington.
South Carolina—H. D. Frazier, M. D., Charleston.

Connecticut—C. W. Chamberlain, M. D., Hartford.
New Hampshire—S. P. Conn, M. D., Concord.
Vermont—Henry D. Holten, M. D., Brattleborough.
Texas—J. H. Pope, Columbia.
Wisconsin—J. Reeve, M. D., Fond du Lac.
Minnesota—C. N. Hewitt, M. D., Red Wing.
New Jersey—D. C. English, M. D., New Brunswick.
Arkansas—A. L. Breysacker, M. D., Little Rock.
Kentucky—Pinckney Thompson, M. D., Henderson.
Delaware—L. P. Bush, M. D., Wilmington.
U. S. Army—Joseph R. Smith, Surgeon U. S. A., New York.
U. S. Navy—A. L. Gihon, Medical Director, Washington.
Commissioner of Education—Hon. John Eaton, Washington.
Marine Hospital Service—P. H. Bailhache, M. D., Washington.
National Board of Health—Stephen Smith, M. D., Washington.

Hon. Erastus Brooks moved that the advisory council appoint a member to represent this Association in the international quarantine convention, if such be allowed. Adopted.

Dr. Chaillé, by invitation, then addressed the Association on The Summary of Conclusions of the Havana Yellow Fever Commission.

Dr. Bruns followed with a paper on the Fevers of the Lower Coast in 1880, in which he vigorously opposed the conclusion of Dr. Sternberg after his investigation, that some of the cases were yellow fever.

In the discussion of Dr. Bruns's paper, Dr. Cochran, of Mobile, made some points of interest: "Inasmuch as this fever has attracted so much attention, I take it for granted that similar epidemics have not occurred in that vicinity heretofore." "The report is almost entirely confined to clinical discussion of the seven cases that were examined by the committee and to the opinions of the resident physicians." Albuminous urine occurred in some of those cases, and it is sometimes found in the congestive type of malarial fever, but it is not asserted that any of them were of congestive type. In hæmorrhagic malarial fevers with albuminuria, the urine is always tinged with blood; but it does not appear that there was any such appearance in these cases. These considerations account for the suspicion with which the Plaquemines cases were regarded outside of Louisiana.

Dr. Sternberg stated that he adheres to his diagnosis of yellow fever in connection with these cases. Dr. Wilkinson expressed the same opinion unequivocally in presence of the Commission. Dr. Howe made a diagnosis of yellow fever in the

Amoretti child attended by him. He then read extracts from a paper prepared by him on the Diagnosis af Yellow Fever.

Dr. Chaillé corrected a misconstruction of the prevalence of yellow fever in Havana in 1879, in Dr. Bruns's paper, where he alluded to 1879 as an exceptionally healthy year. In reality the mortality from yellow fever at Havana in 1879 was considerably above the average.

Dr. Dake considered Dr. Bruns's paper out of place. This Association is no place for the wranglings of the Board of Health.

Dr. Hays, of Plaquemines parish, stated that he treated cases as early as April, of the same nature as the fever which became epidemic in the autumn months. He added: "If the the Point Michel fever was yellow fever, then it prevails in the parish of Plaquemines every year." "As regards the mortality (15 deaths in 234 cases in my practice), there were three who would not submit to medication at all and virtually had no treatment; one who died of a colliquative diarrhœa 26 days after his first seizure, and another who died of exhaustion, succeeding 5 or 6 days of violent epileptiform convulsions, during which he had no fever."

Dr. Thomas, of Georgia, said that the Commission were down the coast only two days, and had not time properly to diagnose those cases. More time should have been taken and post-mortem examinations made. The National Board of Health gave the country the benefit of the doubt in the matter, and for this they deserve thanks.

Dr. Davidson, who was associated with Drs. Bruns and Sternberg on the Commission, gave his opinion emphatically, that the cases seen by them were not yellow fever, but malarial fever. Old residents characterized it as *a fever of the country.* They saw more than seven cases on their visit. In reply to Dr. Chaillé's question: "Of what disease did the six children of the Giordano family die?" Dr. Davidson answered that he could not say. They were not seen by him, and no post-mortem examinstion was made.

AFTER RECESS—3: 30, P. M., Friday.

Dr. Davidson continued his remarks, and mentioned what he

saw himself at the Quarantine Station. While a case of yellow fever from the Excelsior was lying sick in the hospital, children of the neighborhood were playing without restraint on its galleries, and if it was strange that none of them took the disease, it would be still more strange, inasmuch as they escaped, that people on the other side of the river should have become infected!

Dr. Henderson, of New Orleans, thought that both Dr. Bruns and Dr. Sternberg might have judged correctly of the cases which they observed. He himself had repeatedly observed isolated cases of yellow fever, from which there was no spread.

Dr. Bell, of New York, observed, that it was a matter of great difficulty to diagnose isolated cases of fever, and, in an experience of 30 years, he could not come to a positive conclusion with the first case.

Dr. Devron alluded to a belief among Creole physicians of New Orleans, now less prevalent that formerly, that natives of the city are not liable to yellow fever.

Dr. R. B. S. Hargis, of Pensacola, next read a paper on Yellow Fever Recognition and Isolation.

He was followed by Dr. B. F. Gibbs, U. S. N., on A New Method of Experimental Investigation into the Cause of Yellow Fever upon the Basis of Similar Densities.

The hour of final adjournment having arrived, Dr. C. B. White, the President elect, was presented to the Association, and expressed his gratification at the honor thus conferred on him in a few appropriate words.

The following resolutions were then offered:

By Dr. Ames, of Massachusetts.—

Resolved, That the thanks of this Association be most heartily given

To the Hon. H. P. Kernochan, for his invitation to visit Scarsdale Plantation.

To the New Orleans Railroad Company, the Carrollton Railroad Company, the Orleans Railroad Company and the New Orleans and Spanish Fort Railroad Company, for the gratuitous service of their cars.

To the Orleans Club and the New Louisiana Jockey Club, for the courtesies they have extended the members.

To the president and members of the Local Committee of the citizens of New Orleans, for their earnest efforts to make the visit of the Association one of uninterrupted pleasure.

To Dr. L. F. Salomon, chairman of the Committee of Arrangements, for his polite and assiduous attention to the members, whose demands upon him, however exacting, failed to exhaust his resources of patience and courtesy.

To John C. Henderson, Esq., the secretary of the Committee on Transportation, for his untiring labor, in welcoming the coming and speeding the parting guests, who are glad to be able to know him hereafter as a fellow member.

To J. C. Clark, Vice-President and General Manager of the Chicago, St. Louis and New Orleans Railroad; Major D. B. Robinson, Superintendent of the New Orleans, Mobile and Texas Railroad; Charles A. Whitney, Esq., President of Morgan's Louisiana and Texas Railroad and Steamship Company, and the other railroads, and to the Anchor Line, of St. Louis, for their valuable aid in obtaining transportation for members.

To the Western Union Telegraph Company, through J. T. Alleyn, Esq., for their liberality in transmitting messages without charge.

To the press of the city and to the agents of the Western associated and New York associated press, for the extended notices they have published of the proceedings of the Association.

To W. H. Bell, civil engineer of the city of New Orleans, for his map of the city of New Orleans; and, finally, to the citizens of this hospitable city, who have manifested in every way their interest in and kindly regard towards the members of this Association throughout their stay.

Adopted.

By Dr. Harris, of New York:

Resolved, That the thanks of the Association are most cordially offered to Dr. Billings, its retiring President, and to the Secretary and other officers who now retire from the official service of this body.

Adopted.

By Dr. Holliday, of New Orleans:

Whereas, death has stricken from the roll of members one who, from his well-known zeal in the cause of sanitation, was selected at the last meeting of this Association as its First Vice-President;

Resolved, That in the death of Dr. Samuel P. Choppin, this association has lost a valued member, the medical profession one of its brightest ornaments and the State a patriotic, self-sacrificing citizen. In public life his administration of affairs reflected credit to himself and insured welfare to the State. In all the qualities of mind and heart which adorn the upright, bold and unswerving patriot and citizen, grace the accomplished surgeon and physician, he presented a fullness of character rarely equaled and never surpassed. To these must be added, as singularly conspicuous and fascinating, the social amenites and virtues which lent to his whole private life a charm as captivating and resistless as the sterner qualities of his character.

Adopted by rising vote.

By Dr. Baker, of Michigan:

Resolved, That this association deems it important that in times of doubt, respecting the nature of an outbreak of a disease which has some of the characteristics of an epidemic disease, the National Board of Health and State and Local Boards of Health should give the benefit of the doubt to the side of safety to the people, of whose lives they are the sworn official guardians, and that in all such cases all boards of health should take such action as will be applicable for the restriction of the epidemic disease which it is reasonably suspected exists.

Adopted.

At 5, P. M., Dr. Billings returned thanks to the executive committee and others for their efforts to aid him in running this meeting on schedule time. He then announced the adjournment of the American Public Health Association till its meeting at Savannah in November, 1881.

Of this meeting by comparison with others, it is generally agreed, that it was one of the largest in attendance and one of the most successful in the history of the Association. The number of members actually registered as present was 337, of whom 204 were elected at the New Orleans meeting, including 50 from the city itself. The papers and discussions compare favorably in interest and ability with those of previous meetings.

The excursion to the plantation of Hon. H. P. Kernochan took place on Saturday, Dec. 11, and was greatly enjoyed by the many who participated in it. On the whole, it may be safely said that the visitors who came to the New Orleans meeting carried away agreeable impressions of the occasion, and it is to be hoped that they left an influence, which may redound to the lasting good of our city and State.

THE QUARANTINE CONVENTION.

During the meeting of the American Public Health Association a Quarantine Convention was held at the Chamber of the House of Representatives. This was composed of delegates from various State and local boards of health in the Southern States and those of the valleys of the Mississippi and Ohio, who came at the invitation of the Board of Health of the State of Louisiana.

The first session was held at 5, P. M., Dec. 7th, but complete organization was not effected till the following day, when Dr. Geo. A. Ketchum, of Mobile, was elected permanent president.

The following programme had been prepared by the Committee of Arrangements of the Louisiana State Board of Health:

Questions to be submitted for discussion to the Quarantine Convention, at their meeting in New Orleans, December 7th, 1880, in order to secure the adoption of a regular and uniform system of quarantine and of such sanitary measures and precautions as will best facilitate the interests of the public health and those of commerce and Inter-State relations:

1. In what shall quarantine consist? In detention or in disinfection, or in both? When is it to be established, and for what period of time, and by what authority?
2. Against which ports or countries? What is to be considered an infected port, or locality, or ship?
3. What diseases shall be considered as infectious, or contagious, or both?
4. What shall be the period of detention for ships and their cargoes, for merchandise and passengers?
5. Establish a classification of merchandise. Name articles to be submitted to an obligatory quarantine, or to a discretionary one, and those to be exempt from quarantine.
6. How are passengers from an infected port or locality to be treated, if healthy; if diseased; if healthy, but amongst passengers who are or have been infected?
7. Shall the same quarantine regulations be enforced indiscriminately against all vessels coming from the same infected port, whether these vessels have a clean bill of health or not? Whether their sanitary condition is good or not; whether they have had cases of sickness on board whilst being in an infected port, or during their voyage on their arrival, or not?
8. What is the best method of disinfection for ships and their cargoes, to be adopted? Whether by means of cold, of heat, or chemical substances, or by the combined application of these different agents?
9. What is the value of sulphur and of sulphurous acid gas as a disinfectant and a germ destroyer?
10. What is the value of chlorine?
11. What is the value of copperas as a deodorizer and disinfectant, especially when combined with carbolic acid as a local application to the interior of ships?
12. What is the value of carbolic acid?
13. What is the best deodorizer and disinfectant for ships, houses, privies, foul drains, etc.
14. In what cases will it become necessary to discharge on lighters the cargo of vessels, and to transfer it to warehouses for more thorough fumigation and disinfection?
15. How is a uniform and general system of quarantine to be established in the different States of one section of the country, connected by a community of interest? By what action? By the combined action of the several Boards of Health of the different States having common interest, or by the separate action of a body, constituted outside of these States and not being a representative of the same?
16. Necessity for the adoption and enforcement by the different States of the Mississippi Valley of a code on quarantine and sanitary measures, which would obviate many difficulties and misunderstandings, and greatly promote Inter-State commerce and business relations.
17. What is the value of Ship Island Quarantine for the protection of the Mississippi Valley from the introduction of foreign pestilence?
18. Is it possible or advisable that the Ship Island Quarantine should supersede all quarantine establishments on the Gulf of Mexico, and especially those of Galveston, New Orleans, Mobile and Pensacola?

When the convention were ready for work, the programme was totally disregarded. Several substitutes were proposed, but it became evident that there was too little harmony, and too little time for suitable consideration of the important subjects of maritime and inland quarantine. At length on the morning of Dec. 10th, the following resolutions were offered by delegate Moore, of Memphis, and adopted summarily by the expedient of moving the previous question:

Resolved, That the Chair appoint two committees to consist of nine members each, one committee to represent the Atlantic and Gulf States here represented, and one to represent the States of the Ohio and Mississippi Valleys; each committee to prepare a schedule of rules and regulations concerning those matters of quarantine and sanitation which are common to the States of each region respectively, and which schedules shall be submitted to each of such States for ratification and adoption as the basis of action for the protection of the public health; no State to have more than one representative on either of said committees.

2. *Resolved*, That it is the duty of the General Government to defray the expense of all quarantine administration of this character—that is, which extends beyond the boundaries of a single State—and said committees are hereby authorized and instructed to take the necessary steps to secure adequate appropriations by Congress for this purpose; such appropriations to be disbursed and expended in accordance with the usual Treasury regulations concerning disbursements and expenditures.

3. *Resolved*, That the chair be authorized to announce the members of the committees at any time within the next ten days.

The following committees were appointed in accordance with the resolution of Hon. W. R. Moore, delegate from Memphis.

For the Gulf and Atlantic States:——
Louisiana—Dr. Joseph Jones, Chairman.
Alabama—Dr. Jerome Cochran.
Florida—Mr. S. C. Cobb.
Georgia—Dr. G. Z. Freeman.
South Carolina—Dr. H. D. Frazier.
North Carolina—Dr. Thos. F. Wood.
Texas—Dr. Swearingen.
Virginia—Dr. J. G. Cabell.
Maryland—Dr. C. W. Chancellor.

For the Mississippi and Ohio Valleys:——
Tennessee—Dr. J. D. Plunkett, Chairman.
Arkansas—Dr. F. E. Pope.
Iowa—Dr. D. B. Hillis.
Illinois—Dr. John H. Rauch.
Indiana—Dr. M. T. Runnels.
Kentucky—Dr. McCormick.
Mississippi—Dr. Wirt Johnston.
Missouri—D. J. Spiegelhalter.
Ohio—Dr. A. J. Meyers.

The Convention then adjourned, to reassemble in November, 1881, at Savannah, during the meeting of the American Public Health Association.

THE SANITARY COUNCIL OF THE MISSISSIPPI VALLEY.

This body met at Grunewald Hall, New Orleans, at 9:15, A. M., Dec. 9th, 1880, the President, Dr. R. C. Kedzie, of Michigan, in the chair.

Dr. Kedzie addressed the Council at some length on the objects which engaged their interest at the time of their organization, the principal of which was the protection of the valley from the invasion of yellow fever.

He then announced the following questions for discussion.

1. What authority shall have charge of and be held responsible for the public health of the Mississippi Valley, so far as compromised by commerce and trade?

2. Shall quarantine aim to keep infectious and epidemic diseases entirely out of the Mississippi River, or to limit their spread after they have entered?

Drs. Pinckney Thompson and J. W. Holland, of Kentucky, offered the following resolution:

Whereas, experience has shown that measures of quarantine under the sole direction of local and State Boards of Health have not succeeded in protecting this valley from invasion from yellow fever; and,

Whereas, our people habitually view with distrust all announcements and sanitary acts of local boards, when those acts and announcements are of a character to affect the commercial interests of the locality directly concerned;

Resolved, That in our opinion the General Government alone, acting through its constituted sanitary agents, should have the direction and control of national and maritime quarantine.

Dr. Thompson, of Kentucky, set forth the reasons why the resolution should be adopted. He argued that it was the duty of the general government to protect the Mississippi Valley. Louisian had neither the money nor power to do so.

Dr. Spiegelhalter, of St. Louis, advocated the resolution. He pointed out what had occurred during the Memphis epidemic through complications between State boards.

Dr. Plunkett suggested that the wording of the resolution was rather indefinite, and should be made plainer as to the duty the National Board was expected to perform.

After some dicussion on amendments which were offered and not adopted, the resolution was passed, and the Council adjourned until Friday morning at 9 o'clock.

SECOND DAY, Dec. 10th, 9, A. M.

The following letter from Mr. J. C. Clarke, Vice-President of the Chicago, St. Louis & New Orleans R. R., was read:

NEW ORLEANS, Nov. 30, 1880.

Dr. J. H. Rauch:

My Dear Doctor—When the Public Health and Mississippi

Valley Sanitary Associations meet in New Orleans, I want to try to have a committee of seven persons appointed by the Chair—one each from Louisiana, Mississippi, Tennessee, Kentucky, Illinois, Texas and Alabama, who shall prepare a schedule, embracing such articles as can be safely transported from any point where a contagious and infectious disease may exist to and from any points where such disease does not exist without risk of such articles conveying any disease. Then when quarantine exists at any point, such schedule shall be used at all points, so as to have uniform quarantine regulations fit all places and points.

By this course it will enable all transportation companies to fully co-operate with health authorities to arrest and prevent the spread of such diseases along the public highways of water and inland communication. It should be understood that all articles not embraced in the schedule are prohibited during the prevalence of such diseases or the existence of quarantine regulations.

I hope we shall have something tangible done at this meeting.

Yours truly, J. C. CLARKE.

The letter was received and the appointment of the committee ordered.

The committee was appointed as follows:

Dr. J. H. Rauch, of Illinois.
Dr. D. C. Holliday, of Louisiana.
Dr. J. W. Harlan, of Kentucky.
Dr. Wirt Johnston, of Mississippi.
Dr. D. H. Dungan, of Arkansas.
Hon. Noah N. Johns, of Texas.
Dr. George Doman, of Missouri.
Hon. John Johnson, of Tennessee.

The following resolution was offered by Dr. Rauch, of Illinois, as a substitute for one previously offered by Dr. Pinckney Thompson, of Kentucky.

Whereas, There is unfortunately a want of confidence with regard to the prompt furnishing of information by the health authorities of New Orleans with reference to infectious and contagious diseases; Therefore,

Resolved, That in the opinion of this Council it would undoubtedly tend to the restoration of confidence if the State Board of Health would request the National Board of Health to place an inspector at the Quarantine Station and one in New Orleans, who shall have access to the records of the Board of Health, and be furnished every facility for obtaining reliable information with regard to all cases deemed suspicious, and especially with regard to yellow fever.

Considerable discussion took place on the two resolutions,

some members objecting to the wording as calculated to reflect on the Louisiana Board of Health.

Dr. Plunkett, of Nashville, expressed the opinion that the Louisiana Board had done all that was proper in the way of giving notification of the existence of yellow fever.

The resolution having been adopted, the council adjourned.

[It is but just to remark that, in preparing the foregoing abstract of the proceedings of the three conventions, free use has been made of the full and excellent report published daily in the *New Orleans Democrat*.—S. S. H.]

Reviews and Book Notices.

A Practical Treatise on the Diseases of Women. By T. Gaillard Thomas, M. D., Prof. Diseases of Women, College Phys. and Surg., New York, Surgeon to the New York State Woman's Hospital, etc. Fifth edition, enlarged and thoroughly revised. Containing 216 engravings on wood. 8 vo. Pp, 806. Philadelphia: Henry C. Lea's Son & Co. 1880.

The Principles and Practice of Gynæcology. By Thomas Addis Emmet, M. D., Surgeon to the Woman's Hospital of the State of N. York, etc. Second edition, thoroughly revised, with 133 illustrations. 8 vo. Pp. 875. Philadelphia: Henry C. Lea. 1880. [Both sold by Armand Hawkins, 196½, Canal street, New Orleans.]

No other branch of medicine is more zealously or more fruitfully cultivated at the present time than gynæcology, and especially so in this country. It is indeed noteworthy, that two large works, respectively prepared by colleagues in the same hospital, should be published the same year by the same house. The fact that one has passed through five editions in twelve years and the other through two editions in less than one year is sure indication of their appreciation by the medical public and high testimony of their worth. Yet these works can not properly be called rivals for favor, though both occupying the same branch of practice. The one is a treatise, its materials drawn from all sources treating on gynæcology, arranged most systematically and expressed in terse but clear language; the other, in the words of its author, "is essentially a clinical

digest. It includes the results of my individual experience, and aims to represent the actual state of gynæcological science and art."

As might be expected; the matter in Thomas's work has undergone great changes since the earlier editions, for he does not fail to note the progress made in his subjects nor hesitate to abandon or modify previous notions under the light of experience. This commendable trait is conspicuously displayed in the present chapter entitled Areolar Hyperplasia of the Uterus—the so-called Chronic Parenchymatous Metritis; the corresponding chapter in the second edition being entitled Chronic Metritis.

It appears that the old and respectable term Inflammation like the divinities of mythology, has been stripped of its importance by the light of science, and it may end like them by eventual consignment to that limbo of obselete curiosities prepared for all products of the imagination. In this connection Dr. Thomas quotes from a writer not named: "The entity inflammation, fallen from its high and palmy state, is hanging by its eyelids as a pathogenetic factor in most of the organs of the body; its last resting place seems to be the womb, and here it still has a good foot-hold. Why should uterine pathology alone be cumbered by an outworn theory?"

On this subject Dr. Emmet remarks: "A whole generation of physicians has been misled by the delusion of *chronic inflammation and ulceration* of the uterus, conditions which no one yet has been able to demonstrate on the dead body."

One of the most important contributions to gynæcological progress, the chief credit of which Thomas frankly bestows on Emmet, relates to lacerations of the cervix uteri. Dr. Emmet makes the remarkable statement, that about one-sixth of the child-bearing women who have come under his observation have suffered from this lesion; and that, during the last five years in his private practice, "32.80 per cent. of all women under observation, who had been impregnated, and had suffered from some form of uterine disease, were found to have laceration of the cervix." In the following chapter, p. 461, he declares: "Lacerations through the neck of the uterus are of

more frequent occurrance than has been supposed. In fact, I doubt if a woman can give birth to her first child without some laceration taking place; but if it is slight, it heals rapidly and causes no difficulty afterwards." Obstetricians are not less positive in regard to the liability of the perineum to laceration, so that it appears to be the common lot of womankind to suffer laceration of the hymen, the cervix uteri and the perineum, unless they renounce their obligations to their race and their duty to posterity.

The chapter on cystitis in Emmet's work is particularly interesting, as relates to the origin of the operation of cystotomy for the relief of chronic cystitis. Dr. Emmet gives priority to Prof. Willard Parker in this operation on the male in 1850. He allows Dr. Marion Sims the credit of suggesting to himself, in 1858, the non-closure of an opening made from the bladder into the vagina for the extraction of calculus, the woman being at the same time afflicted with chronic cystitis. In 1861 Dr. Emmet made the opening for the express purpose of giving rest to the bladder in a case of chronic cystitis, being assisted by Prof. James P. White, of Buffalo. They both supposed at the time that the operation was a new and original one on the female. In 1871, Dr. Bozeman related a case in which he performed this operation successfully for cystitis in the female, in January, 1861. Owing to the civil war he was unable to publish his case, so that Emmet had not the benefit of his experience, although Bozeman remarks that Prof. Parker had previously operated on the male.

Lawson Tait, in his recent work on Diseases of Women, gives the credit of originating this treatment to Sir James Simpson, of Edinburgh, but Emmet shows that Simpson must have been ignorant of it in 1862. He then proposed the operation to a woman who had previously been under charge of Prof. Simpson for chronic cystitis, and because the latter had never suggested the operation to her, she would not accept it from Emmet. It is probable that Tait never thought that anything could be learned of American gynæcologists, and he naturally presumed that this mode of treatment originated with Simpson, the first Briton who made use of it. If the latter neglected

American medical literature in the same way, it is not improbable that he might have made the discovery independently, though never published before 1870.

It is somewhat remarkable that neither cystitis nor nephritis is mentioned in Thomas's work, although the former may be caused by long neglect to empty the bladder after parturition, and the latter is a natural consequence of the other in a chronic state.

As to Battey's operation, called "normal ovariotomy," both Emmet and Thomas regard it as dangerous and of doubtful utility, yet admissible as a last resort.

Though great minds are wont to run in the same channel, these two authors do not harmonize on the use of intrauterine stem-pessaries. Thomas employs them cautiously, when they can be worn without pain; Emmet condemns them *in toto*. He would as soon think of treating chordee with a straight steel sound. From the non-professional stand-point the verdict might be similar to that in case of the pudding: "The proof is in the eating thereof and the chewing of the bag afterward."

Another point of difference is their respective views on amputation of the cervix uteri. Emmet rejects it altogether, except in case of malignant affection of the cervix. Elongation or hypertrophy of the cervix he recognizes only as a consequence of laceration after parturition. Thomas, while latterly recognizing the great liability of this condition as a result of laceration, yet holds to the existence of congenitel elongation, hypertrophy from several different causes, and cervical hyperplasia. He therefore admits the applicability of the operation aside from cancer, while Emmet, in his vigorous style, stamps it as mal-practice. All of which serves to illustrate the proneness of even eminent men to ride hobbies. Many of our readers remember that Prof. Hodge's special favorite was uterine displacements; Thomas, in his earlier editions, saw a great deal more inflammation than he finds now; and it may be that Emmet will hereafter recover measurably from lacera tion of the cervix.

Of the general merits of these two works, it may be said (*Hibernice*) that they both stand at the head of their special

branch of the healing art. If one is to choose between them, in purchasing for his own use, like Bob Acres with the duelling pistols, he should choose both. S S. H.

Cutaneous and Venereal Memoranda. By Henry G. Piffard, A.M., M.D., Prof. Dermatology, Univ. N. Y., etc.; and George Henry Fox, A.M., M.D., Lecturer on Diseases of the Skin, Col. Ph. & Surg., New York, etc. 32 mo. Pp. 309. Second edition, New York: William Wood & Co. 1880. [Sold by Armand Hawkins, 196½ Canal street.]

This little work is specially intended for medical students, but will be found highly useful by general practitioners who lack time for consulting the larger treatises. In this edition the nomenclature has been revised, in order to adapt it to that of the New York Dermatological Society. Having both table of contents and index, it is quite convenient for reference. The reputation of the authors in their specialty is sufficient guarantee of the excellence of the work. S. S. H.

Opthalmic and Otic Memoranda.—By D. B. St. John Roosa, M. D., Professor of Opthalmology in the University of the City of New York; Professor of Ophthalmology and Otology in the University of Vermont; Surgeon to the Manhattan Eye and Ear Hospital, and Edward T. Ely, M. D., Assistant to the Chair of Ophthalmology, University of the City of New York; Assistant Surgeon Manhattan Eye and Ear Hospital; Surgeon to Charity Hospital. Revised edition. New York: Wm. Wood & Co., 1880. New Orleans: Armand Hawkins, 196½ Canal street.

The authors, in this little work on 298 duodecimo pages, are giving a description of the entire ophthalmology and otology As the authors state in the preface, it aims to give a concise and correct outline of our present knowledge of ophthalmology and otology, and to serve as a kind of dictionary on these subjects. They disclaim to give a primary knowledge of either of these sciences, or complete directions as to the diagnosis and treatment of ophthalmic and aural diseases; any such pretension is excluded merely by the size of the book. As a book of reference, it will, however, no doubt, prove useful as well to the student attending lectures, as to the specialist. The anatomical portions constitute the largest part and are quite complete.

In the appendix will be found remarks on the latest discoveries and theories: Visual purple, the mestric system as applied to lenses, keratoplasty, the use ot magnets for removing pieces of steel or iron from the eye, whether it be from the surface of the eye or from the interior parts, the use of eserine in glaucoma, etc. As a matter of course, however, all presented in a very concise and condensed manner.

As a general thing the informations given are very correct, although there are points of doubtful accuracy; we shall merely, as an instance, mention that it is laid down (page 100) as a cardinal rule in treatment of acute corneal inflammation to avoid all irritants and caustics; it has lately been shown by several writers that the former treatment with atropine or later with eserine is a rather indifferent treatment, and that we often have to look upon an acute corneal inflammation as being brought on or kept up by infection through parasitic organisms; and again it has been shown that cornea in such conditions is much more tolerant to irritating agents than it has hitherto been supposed to be.

This and some other points of minor importance, where we do not exactly agree with the authors' views, does not, however, at all deteriorate the value of this work, and we recommend it heartily to the profession.

In its external appearance it is decidedly elegant.

Sanitation and Education of the First Infancy.

We have received from the editor of the Italian Medical Journal, "*La Scuola Medica Napolitana*" a very interesting pamphlet on *Igiene ed Educazione della Prima Infanzia*, translated from the French by Dr. *Ferdinando Matoni* of Naples—1880.

In the month of March, 1878, the French Society of Hygiene established several medal prizes for the best papers published on Sanitation and Education of the first Infancy. Out of fifty-three manuscripts sent to the Association, ten were awarded with the premiums. A committee composed of Doctors V. Blache, Ladreit de Lacharriere and Méniere (d'Angers) was then appointed to draw from the valuable materials of those

ten papers the most important and remarkable points relative to the subject. The report of this committee was published in Paris in a little volume of about 80 pages, by order of the same Hygienic Association. It is this book that Dr. Ferdinando Matoni has carefully and honestly translated into the Italian language, with the addition of several notes of his that contribute in making the work more complete and worthy to attract the attention of sanitarians and mothers.

Books and Pamphlets Received.

The Surgical Treatment of Cancer of the Rectum. By Charles B. Kelsey, M. D., Surgeon to the Infirmary for Diseases of the Rectum, N. Y., etc. etc.

Annual Address of Edward Fenner, Vice-President of the New Orleans Sanitary Association. Nov. 23, 1880.

Remarks by C. B. White, M. D., Sanitary Director of the New Orleans Sanitary Association, upon Disinfection.

Ninety-eighth Annual Catalogue of the Medical School (Boston) of Harvard University, 1880-81.

The symptoms of Sexual Exhaustion (Sexual Neurasthenia. By George M. Beard, A. M., M. D., Fellow of the New York Academy of Medicine; Vice-President of the American Academy of Medicine, etc. etc.

Higher Education of Medical Men and its Influence on the Profession and the Public. By F. D. Lente, A. M., M. D., President of the Academy of Medicine, at its Fifth Annual Meeting, Held at Providence, R. I., September 28, 1880.

The Pathology and Treatment of Epulis; Address delivered before the Wisconsin Dental Society during its Annual Session in Milwaukee, 1880. By N. Senu, M. D., of Milwaukee. Reprint from Dental Cosmos, October, 1880.

Electricity in Medicine and Surgery. By John J. Caldwell, M. D., Baltimore, M. D.

The "Abdominal Method" of Singing and Breathing as a Cause of "Female Weakness." By Clifton E. Wing, M. D., Boston.

On the Introduction of Food and Medicine into the Stomach when thi ordinary Channel is Obstructed. By Fred Humbert, M. D., F. C. S., Upper Alton, Ills.

Meteorological Summary—November.
Station—New Orleans.

Date.	Daily Mean Barometer.	Daily Mean Temp'ture.	Daily Mean Humidity.	Prevailing Direction of Wind.	Daily Rain-fall.	General Items.
1	30.157	58 2	57.0	North	.....	Highest Barometer, 23rd, 30.517.
2	30.041	60.5	78.0	North	08	Lowest Barometer, 3rd, 29.852.
3	29.906	65.7	91.0	East.	28	Monthly Range of Barometer, 0.665.
4	29.942	69.2	89.0	South	35	Highest Temperature, 75° on 28th.
5	29.975	67 2	89.0	East.	1.18	Lowest Temperature, 34° on 19th.
6	30.164	51.2	62.0	N. W.	30	Greatest Daily Range of Temperature,
7	30 218	49.7	58.0	East.	.....	24° on 18th. [on 24th.
8	30.040	55.2	75.0	East.	.....	Least Daily Range of Temperature 3°
9	29.925	68.7	91 0	South	26	Mean of Maximum Temperatures, 62.3°
10	30.053	64.2	61.0	South	.....	Mean of Minimum Temp., 50.1°.
11	30.219	60.5	67.0	East.	.....	Mean Daily Range of Temp., 12.2°.
12	30.258	62.5	78.0	East.	.....	Prevailing Direction of Wind, North.
13	30.226	59.0	89.0	North	1.38	Total Movement of Wind, 6,404 miles.
14	30.278	47.2	82.0	North	33	Highest Velocity of Wind and Direc-
15	30.166	51.5	50 0	N. W.	.....	tion, 28° South East on 17th,
16	30.193	55.5	60.0	East.	02	Number of Clear Days, 5.
17	30.184	58.7	88.0	S. E.	97	Number of Fair Days, 9.
18	30.373	39.0	70.0	North	15	Number of Cloudy days on which no
19	30.184	45.5	68.0	North	...	Rain fell, 15.
20	30.199	52 0	80.0	North	01	Number of Cloudy Days on which
21	30.336	46.2	67.0	N. E.	03	Rain fell, 1. Total number of days
22	30.435	46.5	45.0	North	.....	on which rain fell, 22.
23	30.424	47.5	42.0	N. E.	.....	—
24	30.221	49.0	88.0	N. E.	25	Dates of Frosts, 16th, 19th and 23rd.
25	30.151	62.0	93.0	East.	12	
26	30.233	50.7	89.0	N. W.	.....	
27	30.143	54.7	91.0	East.	15	
28	30.086	69.7	94.0	South	.....	
29	30.226	57.7	88.0	North	07	
30	30.053	63.7	100.	East.	02	
—	.....	....	....	.....	.....	
Sums	.....	....	....	.....	....	
Means	30.167	56.4	76.0	6.04	6.04	

COMPARATIVE TEMPERATURE.

1871.....		1876.....	59°.25
1872.....		1877.....	58°.3
1873.....61°.16		1878.....	60°.8
1874.....66°.3		1879.....	64°.9
1875..... 65°.64		1880.....	

COMPARATIVE PRECIPITATION

1871.....inches.		1876: 4.35	inches
1872..... "		1877: 6.58	"
1873: 5.95 "		1878: 7.78	"
1874: 1.12 "		1879: 3.79	"
1875: 6.79 "		1880:	"

L. DUNNE,
Sergeant. Signal Corps, U. S. A.

Mortality in New Orleans from November 20th, 1880, to December 11th, 1880, inclusive.

Week Ending.	Yellow Fever.	Malarial Fever.	Consumption.	Small-pox.	Pneumonia.	Total Mortality.
November 20	0	6	22	0	3	112
November 27	0	4	31	0	2	131
December 4	0	6	22	0	7	98
December 11	0	5	17	0	6	85
.....	.....	.....	.....	.....	.....	.....
Total....	0	21	92	0	18	426

NEW ORLEANS
MEDICAL AND SURGICAL JOURNAL.

FEBRUARY, 1881.

ORIGINAL COMMUNICATIONS.

Treatment of Dropsy.

[Read before the New Orleans Medical and Surgical Association.]

By T. S. DABNEY, M. D., New Orleans.

Facts are far superior to reasoning.—HIPPOCRATES.

Mr. President and Gentlemen—Soon after my appointment as visiting physician to the Charity Hospital in this city, Ward 24—one of the wards assigned me—was set aside for the reception of all white male patients suffering from any dropsical affection whatever. Consequently quite a number of patients suffering from the various diseases giving rise to dropsical effusions have come under my notice in a comparatively short period of time. Deeming it beyond the scope of a paper such as this to enter into the minute details of all diseases giving rise to that grave symptom termed dropsy, and deeming it the most contemptible kind of pedantry to interlard a thesis with a vast array of names of authors who have touched upon this subject, I will merely state that obstruction in the circulation of the blood may be assigned as the cause of every form of dropsy. Venous slowness may have its cause before or behind. It will be before, for instance, in portal obstruction and in those pulmonary diseases that embarrass the right side of the heart. The reverse will be true in renal affections. We are taught that in Bright's disease the condition of the blood

is so altered that thickening of the arteries results. Obliteration of the smaller arteries ensues, and consequently a clogging up of those capillaries lying between the peripheral arteries and the veins. Though treating in this paper of all forms of dropsy that have fallen under my observation in the hospital, I will draw your attention especially to Bright's disease and the dropsy attending that malady.

Before taking up this disease, however, I would state that, during the past three months, fully twenty cases of œdema of the feet and legs, due to malarial toxaemia, have been treated by me. One patient in addition to œdema of the feet and legs had ascites to a considerable extent. Indeed I feel sure that fully four gallons of serum were contained in the peritoneal cavity. In all of these malarial cases a well marked anaemic murmur of the heart was audible. Regarding the dropsy in all of these cases as being caused by the weakness of the heart and the impoverished condition of the blood, I deemed it irrational to prescribe either cathartics or diuretics.

Quinia, iron, bitter tonics and, in some cases, arsenic, were prescribed. In every instance the dropsical effusion was absorbed as soon as the tone of the system was restored to its normal standard. As frequent mention will be made of the apocynum cannabinum, and as but scant and unsatisfactory mention is made of it in works on Therapeutics, you will pardon me for describing briefly its medicinal properties and uses. Three years of original investigations into the action and uses of this remedy should entitle my observations to some little respect from you.

The officinal portion of the plant is the root, which closely resembles that of the ipecacuanha plant. The root possesses an aromatic and intensely bitter taste. In small doses it is a most excellent tonic and antiperiodic. In larger doses it is emetic, cathartic, diuretic and diaphoretic. Profuse catharsis produced by this remedy is not attended by much tormina or tenesmus.

Its action on the heart is similar to that of digitalis. My experience with it in acute desquamative nephritis would lead me to infer that its diuretic properties are of an extra-renal character, that is to say, it acts as a diuretic by blood pressure.

If it acted on the already inflamed mucous surfaces of the tubuli uriniferi, it would not only fail to alleviate, but would be productive of much harm.

In some cases the apocynum acts as a powerful aphrodisiac, in other cases it seemed to exert no influence on the sexual organs.

The apocynum soon loses its properties by age, hence that found in drug stores is usually inert. All of my experiments with this drug have been made with the fresh root sent me by friends in Mississippi. Mr. Wm. C. Harrison, a competent druggist in my neighborhood, kindly made a beautiful tincture for me. One ounce of the root makes six ounces of strong tincture. Of this the dose is from gtt. v. to gtt. xxx.

With these introductory remarks I will proceed to the narration of the first sixteen cases treated by me in the Charity Hospital. Through the courtesy of Prof. John B. Elliott, I was allowed to treat several patients in his wards. The notes on some of the cases are very meagre, but such as they are, I will give them.

Cases 1 *and* 2. In March, 1878, in Wards 23 and 26 (Dr. Elliott's), I commenced using tinct. apocyni cannabini in ten drop doses on two patients suffering from general anasarca due to Bright's disease. The patient in 23 had been tapped many times. The usual diuretics and cathartics had been faithfully tried in both cases without any perceptible benefit. The stomach of the patient in 23 became so irritable after taking the medicine two days that it had to be discontinued. A marked improvement, however, occurred in him and he was able to leave his bed and return home. I have not since heard of him. The patient in 26 was entirely relieved in five days of all dropsy, and left the hospital believing his troubles over. He has not since been heard from.

Case 3. George B., of Mississippi, was admitted to Ward 25 October 23, 1879. Patient was about twenty years of age, and presented that peculiar white appearance almost pathognomonic of chronic Bright's disease. The urine was heavily charged with albumen, and casts in abundance were found under the microscope. General anasarca was found to be present. In November I took charge of the case, though I saw

no hopes of any ultimate good. Patient did not pass more than six or eight ounces of urine a day. Prof. Elliott informed me that the usual cathartic and diuretic remedies had been tried in vain.

Patient commenced taking gtt. xx of tr. apocyni cannabini, and in a few days gtt. xxx were administered. The urine soon became abundant, a quart or more being passed daily. Fifteen or twenty watery discharges daily were passed from the bowels. In a few days the œdema of face, arms, legs and feet disappeared; a small amount of ascites alone remained. Examination of the urine showed no diminution in quantity of albumen or casts The dropsy never returned, though the patient's stomach refused to tolerate the drug after an emetic dose of it had been administered. On December 26, 1879, the patient was discharged. I learned subsequently that he died soon after reaching his home.

Case 4. Albuminuria is due to cirrhosis of liver. Jos. McC., aet. 44, native of Louisiana, was admitted to ward 25, in November, 1879.

Urine scanty and highly colored; filled with albumen. No casts. Ascites and œdema of legs to enormous extent were present. Gtt. xx of the apocyni cann. were administered at once. A marked improvement was visible next day. In ten days no trace of dropsy could be found.

The albumen persisted, but no casts were ever found.

In about ten days more every trace of albumen disappeared, but it made its re-appearance in a small quantity in about five days. The urine became very abundant. His bowels acted freely. The medicine was discontinued on four separate occasions and with the invariable result of the re-accumulation of the dropsy. In every instance the dropsy was entirely removed in four days. Patient was discharged in December, with no dropsy and no albumen.

On February 25, 1880, he returned as dropsical as ever. On March 1st, 1880, all anasarca had disappeared. The apocynum cannabinum was supended on March 1st, and patient was put on liq. potass. arsenit. gtt. v. ter die. On March 9th no trace of dropsy or albumen being present, the patient was dis-

charged. I was informed by some of his friends a short time ago that he has never had any recurrence of his trouble.

Case 5. Wm. W., æt. 29, native of Alabama, farmer, admitted to Ward 22, Jan. 23, 1880. Patient had lived in the Louisiana swamps for many years. His constitution was shattered by malarial fevers. His spleen was found to extend beyond the median line. On admission the patient presented general anasarca; great puffiness under the eyes; pale, anæmic appearance. From four to five ounces of urine were passed a day. Pulse was hard, showing thickness of arterial coats, but it was very weak. Patient stated that several years before, he had caught a severe cold, which was followed by acute pain in the loins and dropsy. The urine was found to be full of albumen and casts. Patient complained incessantly of pain in his heart and loins. This being a well marked case of chronic Bright's disease, I determined to take copious notes.

January 24, Patient was put on tr. apocyni connabini, gtt. xx. ter die, and ℞ liq., potass. arsenit. gtt. v., cinchondiæ sulphate, gr. v. ter die. Jan. 25. No change was observable, except three watery passages during the night. Jan. 26. Urine very copious, catharsis moderate. Patient says he feels greatly improved.

The ascites, which was enormous, is considerably reduced. January 27. Marked diminution in size; diaphoresis and diuresis most copious. Bowels only acted twice during 24 hours. Pain in loins greatly reduced; continues in his head. Jan. 28. Patient passed several quarts of urine in the past 24 hours; two passages from bowels. Reduction continues; no pain in back; little in head; appetite voracious. Patient steadily gaining strength.

January 29th. One passage; urine very free. To-day the arsenic and cinchonidia were discontinued. On 28th, the medicine vomited by patient; since then ten drops, thrice daily, have been taken. Complains of heart-burn and pain in head and loins. Urine little above natural in quantity; skin dry and cold; three passages in 24 hours.

February 1st. Complains of skin having been hot and dry last night; intense pain in head and loins.

February 2d. Urine copious; three passages: patient feels well.

The patient not having had a trace of dropsy for many days, his urine being nearly free of albumen and but few casts being found; his appetite being excellent and his general health being good, he was this day, at his urgent request, discharged.

On May 11th, 1880, the patient returned and was sent to ward 24. General anasarca, loss of appetite and general debility brought the patient again under my care. Albumen and casts were found as abundant as upon his first admission. Patient passed not more than five ounces of urine during 24 hours; skin was dry and bowels constipated.

May 12. Patient was given his old prescription of tr. apocyni gtt. xx ter die, and in addition one dose of forty grains of pulv. jalap. co. May 13. Twenty-five watery passages during past 24 hours; urine improved; skin moist; no appetite; patient continued to have on an average 25 operations a day to the 17th, when the medicine was discontinued for 12 hours. On this day but little dropsy was present; urine normal and appetite good. June 24th. Patient left without my consent. When he left his urine contained but little albumen, but plenty of casts. The patient was strong and vigorous looking.

July 24. Patient returned to ward 24 in same condition as before. The apocynum cannabinum soon removed all dropsy and caused the skin and kidneys to act well.

October 22. The patient has had no return of dropsy for two months. His urine is steadily improving; some days a mere trace of albumen can be found, on other days it is quite abundant; all casts have disappeared; patient takes gtt. v of the tr. apoc. cannab. once a day. I will endeavor to keep him in my ward until he recovers or dies.

Case 6. Mitral regurgitation of the heart. Thos. D., aet. 80, negro, was admitted to ward 32, March 15, 1880.

Twenty drops of the tincture were ordered three times a day. The medicine was discontinued after three days, as no results, either good or bad, were obtained. As the medicine did not act as a tonic, diuretic, diaphoretic or cathartic, my opinion was

that either the nurse failed to give the medicine or else the patient did not swallow it.

Case 7. Acute desquamative nephritis. Charles T., laborer, aet. 35, was admitted to ward 26, April 9th, 1880. Puffy under eyes; great ascites; œdema of feet and legs; urine abounding in albumen, epithelial casts and fat globules.

Ordered turpentine stupe, free saline cathartic and tr. digitalis. In a few days tr. apocyni cannabini was substituted for the tr. digitalis. Only one dose of sulphate of magnesia was given, and the turpentine stupe was removed as soon as it had reddened the parts slightly. The dropsy disappeared in a few days. In ten (10) days every trace of albumen, casts and fat globules had disappeared. The nephritis in this case seems to have been due to great exposure to cold and dampness. April 22, 1880. The patient was discharged, strong and vigorous. He seemed cured. No tidings of him since.

Case 8. Subacute nepritis. Patrick C., nurse in Ward 24, for a long time. He is still the nurse there. Patrick is 60 years of age. On April 16 he presented the following appearance: Enormous general anasarca of some months standing. Urine loaded with albumen and casts and very scanty in amount. Suffered greatly from dyspnœa. On the 16th he was put on tr. apocyni cannabini gtt. xx., ter die. April 17, 18, 19 and 20, urine steadily increased in quantity and diminished in albumen. Dyspnœa relieved and appetite restored. Dropsy greatly reduced. On May 4th no trace of dropsy, albumen or casts was found, on a careful examination. I forgot to state that the attending physician prior to me had tried in vain to relieve the dropsy by means of pulv. jalap. co.

Since May 24th up to date, October 24th, the patient has continued well. I believe him radically cured. Patient took gtt. v. of the apocynum for a month after all signs of disease had disappeared.

Case 9. Chronic tubal nepritis. Harry A.; æt. 28; paper hanger. Admitted to Ward 24, April 16th, 1880. Patient passed one pint of urine daily, 35 per cent. albumen, casts abundant. General anasarca present.

April 17, put on the apocynum gtt. xx. ter die. April 18, no

improvement. April 19, slight improvement. April 20, 21, 22–30, marked, but gradual improvement. May 4, no dropsy, casts or albumen.

May 8. A faint trace of albumen; no casts. May 10, slight trace of albumen. Patient steadily gained in looks and strength from the first few days. May 11. Patient left, against my judgment, believing himself cured.

The patient was readmitted to the same ward on September 16th, 1880. On admission he was suffering from general anasarca and anæmia. Patient only passed about half a pint of urine in twenty-four hours. Urine loaded with albumen; casts abundant. Patient suffered greatly from nausea, cephalalgia and other uraemic symptoms. Old treatment was at once instituted. In addition, infusion of juniper and bitartrate of potash were given occasionally. In a few days patient's urine became notably increased and uraemic symptoms disappeared. The dropsy has gradually diminished, but is still not entirely removed. The albumen and casts have not diminished much up to date, October 29.

Case 10. Enormous ascites due to cirrhosis of liver. No œdema in upper or lower extremities.

Patient: J. H. D.; æt. 42; farmer; was admitted to ward 24, bed 359, May 11, 1880. Neither casts nor albumen were found in the urine. Patient was at once put on the apocynum. An occasional dose of compound jalap powder was administered. The patient upon admission stated that he had been confined to bed for several months by extreme debility. The ascites gradually disappeared. June 15, no ascites, patient was strong enough to walk about, having evidently gained greatly in flesh and strength since his admission. August 1, patient had a profuse hemorrhage, and sunk at once into a state of coma; August 2, patient died.

Case 11. Aneurism of ascending part of aorta. Carl W.; æt. 56; came from Pensacola, and was admitted to Ward 24 on May 13, 1880. Upon admission patient was suffering greatly from dyspnœa. He said he had "asthma," and had been treated for it in vain. His hydrothorax being excessive prevented my making a positive diagnosis at once; œdema of legs and feet

was quite marked also. Upon admission patient was unable to sleep without great uneasiness; appetite was bad. Tr. apocyni was administered in the usual dose; occasionally a jalap powder was given.

I forgot to state that the apex beat was 1½ inches to left of the left nipple. It was also much higher up than normal. Hydrothorax of right side was greater than that of the left side. May 19th. No dyspnœa. Patient enjoys sleep and food. But little œdema of lower extremities; hydrothorax much improved. May 29. All dropsy gone; both lungs filled well; apex beat of heart in its normal place. Patient's appetite became voracious. He stated that his sexual passions were greatly excited. June 2d. Patient was discharged, having gained in flesh and strength greatly.

Case 12. Mitral regurgitation. George C., æt. 46, sailor from Algiers, La., was admitted to ward 24, bed 362, May 30, 1880. As soon as I saw the patient I advised him to go home to his family. I was satisfied after my examination that a few months or weeks would put an end to his suffering. As the patient insisted on being admitted, I ordered tincture of digitalis. Next day I ordered the tincture of apocynum and compound jalap powders. June 3. Patient's stomach was too weak for either food or medicine—great dyspnœa and anorexia. June 5. Fifteen drops of digitalis were ordered three times a day. June 6. Stomach being settled the apocynum in ten drop doses was again ordered; 7th, 8th,, 9th, 10th, considerable improvement; dyspnœa all gone. For the first time for weeks the patient was able to sleep lying down; 11th, 12th, dropsy disappearing quite rapidly, but the irritable stomach prevents pushing the remedy.

June 13. Acute inflammatory rheumatism set in. The apocynum was discontinued, and salycilic acid in large doses substituted. June 18, rheumatism greatly improved. No re-accumulation of water since the apocynum was discontinued. Patient sleeps and eats well. July 24, patient left, having a trace of œdema in the feet and legs only. I heard he died a few weeks afterwards.

Case 13. Mitral obstruction. Willie, æt. 7; transferred from Ward 18 to Ward 24 on June 8, 1880. Upon admission patient could scarcely breathe on account of the enormous ascites; œdema of lower extremities great. Deeming the patient past all hope, I hesitated in prescribing. I however ordered one dose of five drops of the apocynum. Next morning the little boy died.

Case 14. Mitral regurgitation. Wm. G., æt. 45; admitted to Ward 16 on May 3, transferred to Ward 24, June 8. Great ascites and œdema of lower extremities; dyspnœa so great as to prevent the recumbent posture; patient had not lain down for three months. June 19, patient was discharged free from all dropsy and feeling in fine spirits. A few pills of elaterium were administered during the first few days. The apocynum was used throughout. Patient was recommended to take five drops of the tincture of apocynum three times a day to regulate the heart's action and to prevent the re-accumulation of the dropsy. He did not follow my advice, so he was readmitted to Ward 24 on October 20, 1880. Since his re-admission up to date, October 30th, I have not used any apocynum, but have kept him on elaterium and compound jalap powders. To-day the dropsy shows but little diminution, although the remedies produce free catharsis. In a few days I will try the apocynum, and I feel sure he will be entirely relieved in a few days.

Case 15. Christian W., æt. 30; Swiss, cook; diagnosis, chronic nephritis.

Patient had been in the Charity Hospital before; also in the Nashville Hospital. His attending physicians in both institutions pronounced his case as one of chronic Bright's disease. Patient was admitted to ward 24, bed 352, June 30, 1880. Upon admission, he was suffering from general anasarca; albumen and casts in abundance were found in his urine; urine scant. Ordered apocynum three times a day; also an occasional jalap powder. July 16. No anasarca; urine much increased, but casts and albumen still present. Patient's general health apparently fine; complains of erethism. July 23. No re-accumulation; urine not examined for albumen or casts

since the 16th. Patient left unexpectedly to go to work. A friend of his informed me a few days ago that he continues well.

Case 16. Chronic nephritis, accompanied by great anasarca.

E. W. T., æt. 35, native of New Orleans, clerk, was admitted July 27, to ward 24, bed 357. Urine contained 40 per cent. albumen; specific gravity 1014. Under microscope granular, epithelial and hyaline casts were found in abundance; about twelve ounces of urine passed in 24 hours.

October 30. Patient's urine very copious; several quarts during the day; only a trace of albumen present; casts difficult to find; a slight ascites still persists. Within the past few days infusion of juniper and bitartrate of potash have been used as adjuvants to the apocynum, which has been used from the beginning; occasional doses of jalap were administered.

The patient is still under treatment. It will be evident from the above cases to all present that, in the removal of dropsical effusions, I have not confined myself to any one remedy, but that I place the apocynum far above all other hydragogues—especially in Bright's disease. I have not pretended to state that the apocynum exercises any specific action in Bright's disease, but it is worthy of notice that in almost every instance where it was administered in that affection, marked diminution of albumen and casts occured; and in some instances every trace of both disappeared. Whether or not this remedy exerts any peculiar influence over Bright's disease, clinical facts do not allow us to state positively. The following advantages, however, possessed by the apocynum should commend it to all physicians:

1st. The small quantity necessary to produce free diuresis, emesis or catharsis.

2d. Its pleasant, aromatic taste.

3d. Its fine tonic properties, which compensate for the depression consequent on free catharsis.

4th. Its harmlessness—an over-dose being speedily followed by free emesis.

With this remedy at our command, I conscientiously believe paracentesis to be, in most cases, unnecessary.

Aneurisms of the Pulmonary Artery in Caverns.

[Read before the New Orleans Medical and Surgical Association.]

By EUG. J. MIOTON, M. D.

Mr. President and Gentlemen—The subject of this paper is altogether modern and recent. It is to Dr. Fearn, of England, we owe the very first description of a case of aneurism of one of the branches of the pulmonary artery. Before this author, aneurisms of the aortic circulation were the only ones described, and the pulmonary artery seemed to be free of such lesions; since, a large number of such cases have been observed, studied and presented to different medical societies.

I did not have in the writing of this paper the pretension of making a complete pathological study; the documents are not numerous enough. My intention is simply to present a few observations of cases, with the opinion and theories of different authors.

Definition.

An aneurism of the pulmonary artery is a rare dilatation, partial or total, of the pulmonary artery, accompanied either by thickening or thinning of the walls of the vessel, and depending upon a cavern, in which it may rupture and cause a fatal hemorrhage. It is more of an anatomico-pathological fact than a morbid state, a fact which presents a genesis, an etiology and clinical characters proper to it. The cognition of this aneurism is of comparatively recent date. Little will be said of ancient authors, as they give nothing precise or clear on this affection. It will not be the same, however, as regards modern writers; it is in their observations that I have found the necessary elements for the work I have undertaken.

History.

Hemoptysis has been the subject of very carefal studies on the part of the ancients, but none has ever forseen the relation existing between the terminal hemoptysis of phthisis pulmonalis and the alterations of the pulmonary artery.

Boerhaave, Van Swieten, and others of the 18th century, have, it is true, spoken of rupture of the pulmonary vessel,

as being the cause of hemoptysis, but they do not give the slightest mention of the abrasions which might predispose to this rupture, nor even of a possibility of those alterations. Other writers have said a few words on dilatations of the pulmonary artery, but with no precision, and we must come to the 19th century to find light and discoveries on our subject.

Laënnec, in the beginning of this century, had forseen the truth. Building upon the theory of the ancients, who ascribed hemoptysis to the rupture of pulmonary vessels, he says: "Be it as it may, this theory, adopted without sufficient proof, has probably been abandoned in the same way and in a manner altogether too peremptory by learned physicians. It is not impossible that an aneurism of one of the branches of the pulmonary artery, or at least of the veins, may develop itself, and give rise to a hemorrhage, although there exists, at least to my knowledge, no well described fact of this sort. (*Traité d'Auscultation*, 1839.)

Chomel goes further, and says: "The seat of the hemorrhage having been recognized, it remains to be known whether the hemorrhage is idiopathic or symptomatic. The principal lesions which may give rise to hemoptysis are, 1st, the rupture of an anuerism of the aorta or of the pulmonary artery in the bronchi, or in the ulcerated trachea; 2d, an ulceration of the pulmonary parenchyma and of the vessels which run through it. (*Dictionnaire en 30 articles, Hémoptyné*, p. 35.)

But proofs of the facts foreseen by Laennec, and affirmed by Chomel, were brought by the English, and Fearn was the first to produce them in his paper, published by the *Lancet*, in 1841. He speaks of the raritly of the lesion, but in the meantime ascribes the silence of writers on this subject to the hasty manner in which pathological researches are so commonly made; hence the comparatively small number of cases which have been reported. He ends his letter recommending to his colleagues a more careful and minute examination of the state of the vessels in pulmonary hemorrhages.

Fearn's appeal to the medical profession was not lost. Two years later, in 1843, Pencock published the observation of an

aneurism of the size of a large pea developed in a cavern.—(*Medical Journal*, 1843.)

A few years later, in 1861, Rokitansky published the relation of a similar case. I shall reproduce it here, it being one of the most interesting: The subject, a woman aged 32, was killed by a secondary hemoptysis; in the superior lobe of her right lung was found a monstrous cavern (sic), which penetrated the median lobe, and which was provided with a large number of bronchial orifices. The wall of the cavern contained a large branch of the pulmonary artery, which was denuded in a portion of its length; the denuded portion was dilated to such a degree as to protrude in the cavern, and the culminating point of this protrusion ruptured. The opening presented the following: a fragment of the size of a pea was detached from the wall of the vessel, but still held by a small pedicle, in such a manner as to resemble a concavo-convex valve, applied to the orifice of the perforation. This was a perfect type of the opening in V, described later by Rasmussen as being the general mode of rupture of pulmonary ectasies.

In 1866, two new cases were reported by Cotton (*Med. Times*, 1866). In 1867, Liddell published an observation. In 1868, Cotton published two other observations; these two and that of 1866 were the subject of a most interesting and remarkable article (Cotton, *British Medical Journal*, 1867). The following are a few considerations given by Cotton at the end of his three observations:

In these three cases, a little briefly, but perhaps sufficiently described, the aneurismal dilatations of the pulmonary artery, although differing from each other as regards volume and position, were evidently due to a similar cause. The artery, instead of abruptly terminating at the circumference of the cavity, or of running along its side as a partly or completely obliterated vessel (as is often the case in tuberculous cavities), had remained pervious, had lost the support of the pulmonary tissue surrounding it, and had dilated in the form of an aneurismal sac. As general symptoms in all three cases, there was but a sudden and profuse hemorrhage, which could not be checked. Thus, with the exception of some few rare cases,

and although the pathological lesion I have just described might be strongly suspected, it is hardly possible that the diagnosis can be made with any degree of certainty during life.

I do, however, believe, that the rupture of an aneurismal dilatation in a tuberculous cavity is not, as I acknowledge I believed for a long time, a pathological curiosity ; it is not only a fact far from being rare, but even of a considerable practical importance. This accounts for these violent and sudden hemoptyses which occur in the last stage of phthisis. In 1871, Powell (Transactions of the Pathological Society of London, 1871) presented to that society a paper, in which, after having given Laënec's hypothesis, and Rokitansky's, Herard's, Cornil's, Rasmussen's and Carl Burger's opinions, he reports two cases and thirteen autopsies, and arrives at the following conclusion : Fatal pulmonary hemorrhage, in cases of advanced phthisis, is almost invariably caused by the rupture of a branch of the pulmonary artery in a cavity. In three of Powell's fifteen cases, the seat of hemorrhage could not be found. The remaining twelve presented a well marked aneurismal sac situated on a branch of the pulmonary artery, and rupture was the immediate cause of death ; but of these twelve cases in eleven only had dilatation preceded the rupture ; in the twelfth, the hemorrhage was the result of an ulcerative erosion of the wall of the vessel, but in front of this erosion was found a small aneurism. In the eleven cases just spoken of, the aneurism was sacciform in six, and in five the aneurisms according to Powell, could be called semifusiform or ectasies.

Powell thinks that cases of phthisis, with old standing cavities and of slow transformation, are more favorable to the production of aneurisms and ectasies of the pulmonary artery. In cases where the cavities, though being old, are the seat of a rapid ulcerative processus, these cavities, he says, are very vascular, and the vessels which they contain are exposed to an erosion which will give rise to a fatal hemorrhage.

The difficulties which are experienced in searching for the seat of the vascular alterations in hemoptysis, are very great. A priori, one might might believe the best way to proceed is to open the bronchial tree, hoping to find the origin of the

hemorrhage by following up the branch which gave exit to the blood; but a rapid examination of the aërial canals suffices to show that it is impossible to find the diseased vessel by such a procedure, for the trachea, as well as the bronchial divisions and sub-divisions, are filled with a bloody and frothy mass. The blood passing from the perforated vessel into the cavity flows incessantly into the corresponding bronchus, thence progressively into the trachea, where the respiratory acts mix it continually with the inspired and expired air.

The result is that, during inspirations, this frothy blood penetrates into the bronchial ramifications, so much so, that the patients die, not so much from the great loss of blood as from asphyxia caused by the presence of this liquid in the aërial tubules.

The best mode of proceding, according to Dr. Damaschino, of Paris, is the following: A canula is placed on the pulmonary artery, the trachea and larger bronchi being opened at their posterior surface; an injection of simple water is made through the canula in the pulmonary artery, the water partly coming out through the bronchus corresponding to the lung in which the hemorrhage occurred, let us say the right lung for instance; another canula is then placed on the right branch of the pulmonary artery, and another injection is made after having beforehand opened the principal right bronchial division; the liquid coming from a single lobe, it is on the artery of this lobe the canula is placed and the injection operated, the corresponding bronchial divisions having been opened. By opening the bronchioles through which passes the injected liquids it is very easy to find the cavity and see the liquid escaping directly from the perforated vessel; it is also very easy to dissect the artery, the cavity, the corresponding bronchus and the aneurismal sac. The arterial perforation and the lesions which caused it are then plainly seen.

The size of these aneurisms varies from a pea to that of a chestnut; their color at the autopsy is of a deep blue. In the majority of cases the aneurism is single; in some cases, however, two and even three have been found on the same artery.

They are generally divided into two classes, aneurisms properly so-called, and aneurismal ectasies. The thickness of the walls of the aneurism is augmented and at others diminished, especially at the seat of the perforation; in some cases the walls are the seat of a fatty degeneration. The perforation is situated at the most culminating point of the sac, that is to say where tension and pressure are greatest. In the sac and on a level with the perforation are ordinarily found black, soft clots. The artery is sometimes empty, but in most cases it contains freshly coagulated blood. The aneurism is composed of three coats. The internal coat is a continuation of the endartery and is in immediate contact with the clot; the median is somewhat thick, but presents nothing special; the external is separated into two layers and distended by an effusion of blood, which has infiltrated between them as is the case in dissecting aneurisms.

ETIOLOGY.

The pre-existence of a cavity and the denudation of the vessel certainly rank first among the several causes, which have been assigned to the development, and to the rupture of aneurisms. The existence of an aneurism is always constant with that of a cavity. Aneurisms of the pulmonary artery have also been found in some few cases of bronchial dilatation. Elimination of a gangrenous portion of the lung of hydatids of the lungs, and also of abscesses of different nature are also some of the causes of pulmonary aneurisms.

The maximum of frequency is between 15 and 46 years of age. These aneurisms are rare in young children. The form and size of the cavern has no influence on the formation of these aneurisms.

Alcoholism, which plays a certain part in the formation of aneurisms of the aorta, cannot be presented here as an immediate cause of aneurisms of the pulmonary artery. In the aorta the starting point of aneurisms resides in the lesions of the internal coat, which are so common in alcoholics, but in the pulmonary artery the aneurism is consecutive to an external cause which acts on the periphery of the vessel.

If a vessel runs along the surface of a caseous or tuberculous mass, it is evident and certain that, on the expulsion of this mass, which will leave a cavity, the vessel will be denuded. This, and also the vascularity of the lungs being known, it would seem proper to suppose aneurisms and hemorrhages of frequent occurrence; but such is not the case. These accidents are rare; and the rarity is explained by an obliteration of the vessels by means of a hyperplasia of the connective tissue which opposes their dilatation and their rupture. This hyperplasia takes place during the period of evolution of the tubercle or of the caseous products. The rupture of the aneurism and the hemorrhage which follows it, are brought about by the progressive increase of intra-vascular tension resulting form the obliteration of some of the branches of the pulmonary artery, obliteration which accompanies the destruction of the lungs. This tension of the blood and the rupture of the aneurism are favored by all the accidents which will increase the abnormal pressure, such as cough, vomiting, etc. These aneurisms have been found most frequent in that form of phthisis known as miliary tuberculosis.

There is no symptom, no sign, which can point out the existence and development of the aneurism. The presence of such a lesion can only be suspected by the rupture and hemorrhage to which it gives rise—suffocation, uneasiness, and a sensation of heat in the chest, dyspnœa, palpitations, dry cough, are some of the premonitory signs. The patient dies with all the symptoms of a sudden and copious hemoptysis, exhausted not only by the quantity of blood lost, but even more so by the asphyxia resulting from the occlusion of the bronchi by the blood; hence, excessive dyspnœa, cyanosis of the face, extremities cold, action of the heart disturbed and tumultuous, etc. The blood presents a blackish-red coloration, which is due to the fact of its having remained for some time in the bronchi.

It is useless, I think, to insist upon the gravity of the prognosis and the inefficacy of drugs and medicines in so dreadful and serious a lesion.

The Preservation of the Teeth.

By A. G. FRIEDRICHS, M. D., New Orleans.

It is a known fact that a perfect condition of an organ is necessary for that organ to perform the functions peculiar to it; also, that each and every organ is dependent upon its fellow organs to aid each other in the sustenance of the equilibrium, each adding its portion to form the greatest boon to which flesh is heir—Health. So indispensable are they to each other, that the slightest disturbance in one, however trivial it may appear, if not immediately, will eventually affect the whole, disturb that equilibrium, and if not noticed, will produce results irreparable. Consequently, the subject which I present for your consideration this evening is not only in a physiological point of view one of interest, but in its application to the preservation of health, the tendency to the improvement of the general condition and physical constitution of the human family, cannot but be a subject of great and paramount importance.

Of all the organs, the most slighted are the teeth. And why is it? To insinuate that it is a subject of no importance to us would hardly be tenable; to suppose that their importance is not recognized, is less so; to assert that they play no part in the economy, is even less, and to call all my confreres ignorant, would not be justifiable.

Nevertheless, the fact stares us in the face that they rarely receive any attention, and the only palpable solution is simply, that such is due to criminal neglect in some, or what is worse, to an unwarrantable ignorance in others, who, I am sorry to confess, compose the majority.

The germs of the temporary teeth make their appearance at about the fifth, the first molars of the permanent set at the fifteenth, and the bi-cuspids, canines and incisors at the sixteenth week of intra-uterine life. These are not fully developed until erupted, and when once erupted they undergo no material change, except a slow and continuous modification of their substance, which confers upon them a greater density and a harder consistency as the individual grows older.

The period of eruption of the temporary teeth vary; but they usually take place between the seventh and twenty-fourth month of the child's existence. In exceptional cases, the child is born with some of the teeth erupted. Any delay in their eruption is due to constitutional causes.

As will be seen from the foregoing remarks, nearly the whole of the temporary and goodly portion of the period of development of the permanent set occurs during intra-uterine life, and as it is during this period of development, that the teeth are most susceptible to all influencs; and as it is then also, that syphilis and other constitutional discrasia leave their indelible stamp upon them, it only serves to prove to us how necessary it is to environ the pregnant female with only such conditions as will favor the production of a robust and healthy offspring. Important as any, is the selection of the proper nourishment. As regards the different articles of food, their analysis and value, I will content myself by calling the attention of my confreres to the fact, that they are invaluable to the production of a perfect organism, allowing them to study their individual cases and concentrate their efforts to accomplish the most good. But, let the medical man bear in mind to administer only such food or medicines as contain the proper elements to nourish the dental papilæ, while in utero. Under such a treatment, the dental arch, teeth, and in fact, all the osseous structures of the human frame, will be better developed. The teeth, though they may not yet be visible, must not be deprived of the required nutrition, and perfect teeth are most likely to be possessed by a healthy child.

At birth, we find in the alveoli of the child, twenty deciduous teeth, very nearly developed, and the germs of twenty-four of the permanent teeth at various stages of development. The germs of the second molars make their appearance at the third month after birth, and the germs of the wisdom teeth at the third year.

All these teeth, with the exception of the wisdom teeth, are erupted between the seventh month and the fourteenth year; covering a period of the child's life that is most susceptible to all morbid influences, and any condition that will effect its

general health, will likewise leave its trace upon the forming teeth.

There is a prevalent idea that the deciduous teeth are of no value, and in consequence thereof, deserve no attention; satisfied with the narrow-minded view that should they be lost, they will be replaced by the permanent set.

Deplorable it is that such an idea should have engrafted itself upon humanity! These teeth are certainly intended to perform important offices, and every effort should be used to retain them in the mouth in a healthy condition until their successors are ready to be erupted. Besides their value in the mastication of food, they assist in the development of the jaws and under favorable conditions they ought not to decay at all, and should drop out as white and clean, when they have fulfilled their mission, as when they were first erupted. An early loss of them retards interstitial growth of the alveoli, interferes materially both with the development and eruption of the permanent set, causing an untold amount of suffering, and finally resulting in an irregular and crowded denture, which completely mars the comeliness of the face.

Then, again, when a temporary tooth decays, the pulp dies, the absorbtion of the root is arrested and the tooth remains to cause soreness and inflammation—a mechanical obstacle to the advancing tooth, and in consequence, will be erupted either inside or outside the line of the arch.

The neglect of these teeth and the consequent suffering and injury to little children is a reproach to all those who fail to see or who disregard their obligations in this particular. It is the duty of every humane man to do all in his power to induce parents to understand the importance of giving such attention to the deciduous teeth as will prevent the occurrences to which I have just referred.

The most prominent among the many conditions which cause a loss of the teeth is dental caries. In fact, I might say, it is the most universal of all affections. The teeth are liable to its intrusion at any period of their existence—from their eruption to their loss. Besides, no race, either modern or ancient, has been free from it. Broca and Mumery examined

carefully a large collection of skulls in order to ascertain the frequency of dental caries. They found among the Egyptians, a percentage of 41.66. Among the ancient Britons, with elongated skulls 2.94, and those with round skulls 21.87; among the Romano-Britons, 28.67; and the Anglo-Saxons, 15.78. The Esquimaux, the New Zealanders, and the inhabitants of the northern parts of the East Indies, exhibit the lowest percentage among the modern races.

Children's teeth very frequently, resemble those of their parents, inheriting the many defects and malformations of their teeth, and in the same way you find that children of the same family will have the corresponding teeth to become carious in the same order and at the same period. Under our present social condition it is a rarety to find any one, who is the happy possesssor of a perfect denture. Some families and even races inherit a greater or less exactness to absolute perfection, both in the external and internal structure, and may sometimes attain that perfection, giving to the teeth such power of resistance, that in the absence of a constant or energetic altering cause, caries is never developed thereon.

On the other hand, every defect, whether upon the surface or in the interior, only makes them the ready prey to every morbid change.

Dental caries, unlike caries of the bone, commences in the hard tissues and spreads to the vascularized and nervous pulp. The etiology of dental caries is a chemical disintegration, and softening of the dental tissues, due to the action of acids. Magitot, in his work on Dental Caries has submitted the teeth to the action of acids and salts, during certain quite long intervals (up to two years), with the following results:

A solution of cane sugar in proportion of one to three, at the end of two years, with the following results:

The liquid is reddish, covered with a thick layer of mould; re-action clearly acid, with a faint odor; taken between the fingers still thick and of a syrupy character. The teeth placed in the solution are completely softened and black; the roots having a gelatinous consistency; the enamel as friable as chalk, detached at several points, showing the ivory beneath, it having undergone disintegration to the same degree.

The teeth, protected by a coating of sealing-wax, show at the points exposed, identical alterations as the proceeding, which thus localized produced a cavity having the characteristics of caries.

A similar solution in distilled water and cane sugar, filtered and raised to a boiling heat, placed in a flask and hermetically sealed. After two years the teeth were examined and were found in a perfect state of integrity.

Following from the above experiments, sugar exerts no destructive influence upon the teeth in its quality as sugar; only on its undergoing modifications of the nature of fermentation, leading to the formation of lactic acid and afterwards, into butyric, then preponic and valeric acids—agents which have a most energetic and destructive action on the teeth. Lactic acid, in proportion of one in a thousand, exerts only a moderate action, but in a higher degree of concentration of one in a hundred acts energetically alike upon the dental tissures, producing changes that have the characteristis of caries. This is the most frequent alterant which occurs in the mouth. Besides its being formed spontaneously, it is introduced there in other ways,—in matters vomited, in sea siskness, dyspepsia and other diseases. It is also in the gastric juice in a free state in a very notable proportion.

Buturic acid produces the same results as lactic acid.

Citric acid in proportion of 1 in 1000 exerts a vigorous action, and in the solution of 1 in 100 destroys the teeth exposed in about two months. There is hardly any other substance that exerts so pernicious an influence upon the teeth, and as it occasions no discoloration, it naturally leads to the conclusion that it induces "white caries." From this is seen the danger that may result from the frequent use of such fruits as oranges, lemons, limes, mandarins, &c., which owe their acidity to this acid.

Malic acid acts uniformly upon all the dental tissues, but not so violently. It is the acid principal in cider. Teeth have been put in casks of cider, and after two years no trace of them could be found. Alum produces no action either upon the

ivory or cementum; but destroys the enamel with great energy.

Bi-oxalate of potassa acts solely upon the enamel, but not so intensely as alum. Certain articles of food are rich in oxalates; such as tomatoes, sorrels, &c.

Acetic acid in a weak solution exerts a very slight, if any action; and in a stronger solution of 1 in 100, acts vigorously upon the ivory and cementum, without any action upon the enamel. Consequently, the use of vinegar may become injurious whenever the enamel is wanting, either through accidents, caries or wear. Teeth, in the latter condition, when brought in contact with this agent, experiences a sensation of being set on edge, and at times real pain.

Tartaric acid and acid tartrates acts similarly to the foregoing. Tartaric acid, when subjected to the warmth of the mouth, loses its fixity, enters upon fermentation, giving rise to acetic, butyric and preponic acids. The acid tartrates is found in many wines and fruits.

Chloride of sodium has no action upon the teeth, and tannin is a special alterant of the ivory and cementum; but requires so great a degree of concentration, that it could hardly exert any deleterious influence in the mouth.

Magitôt divides the substances of his experiments into four groups, viz:

"1. Those which attack all the dental tissues alike, such as sugars, by their products of fermentation; lactic, butyric, citric and malic acids—the products of putrefaction of albumen and albumenoid substances.

2. Those which destroy the enamel exclusively — alum, oxalic acids and acid oxalates.

3. Those which disorganize the ivory and cementum—ascetic and tartaric acids and acid tartrates.

4. Those which exert no influence on the dental tissues, such as salt and other substances which are found in the bucal cavity, soluable in the saliva and of a neutral or alkaline reaction."

All of the foregoing substances exist, and are daily introduced in the mouth.

Caries is favored by all modifications in the normal saliva, and they may be noted as occurring in all local affections of the mouth and pharynx, and acute and chronic diseases. I might also state that syphilitic, rheumatic, gouty and other diatheses affect the teeth by interrupting the phenomena of evolution of the dental tissues, giving rise to the defects of structure and composition; but at adolescence they cannot alter the teeth otherwise than by the morbid modifications which they may occasion.

Wright states, that the acidity of the saliva is due to the presence of diverse acids. Lactic acid is found in rheumatism, intermittent fevers, diabetes and gastro-enteritis; acetic acid with apthae, scrofula, scorbutus, variola, indigestion, and after the use of acid wines; hydrochloric acid, in connection with simple gastric disturbances; uric acid, with gout, and oxalic acid with digestive derangements. Also, that the alkalinity of the saliva is an excellent aid in the diagnosis, inasmuch that purely nervous facial pain is always accompanied by an alkaline saliva, and rheumatic pain by an acid saliva.

Among the local conditions may be classed all inflammations of the mucus membrane of the mouth and pharynx, such as stomatitis, larynxgitis and pharynxgitis.

Among the general conditions, all inflammatory fevers, all intestinal troubles and dyspepsia.

In 1835, Donné had shown that the majority of acute diseases bring with them, this uniform result in the mouth, with simple variation in the intensity of the re-action. In pneumonia, bronchitis and acute pleurisy, he had remarked the more or less acid condition of the saliva. Also, in gastric and intestinal affections and typhoid fever, his clinical observations, collected with great care, have established, that the saliva alkaline at the beginning of the malady, becomes excessively acid and again at convalescence, assumes its former reaction. Donné thought these signs were of sufficient importance to determine the gravity and the critical periods of the disease as well as a means of differential diagnosis.

"Chronic diseases favor the production of caries, by increasing the ptyline, the agent of acidity and fermentation, making it difficult for the patient to expectorate; also exciting a hyper-secretion of mucous which is acid."

These conditions are present in all chronic intestinal troubles, interetis, gastralgia, dysentery, dyspepsia and phthisis. This will also account for the prevalence of caries in the teeth of pregnant females, during the middle and later months of pregnancy, when the distended uterus, pressing upon the stomach and intestines, produce the same results in the mouth as has just been stated above. Besides, you have the disturbance of digestion with vomiting, which would in itself change the normal condition of the saliva.

Excessive alkalinity of the saliva favors the deposit of tartar upon the necks of the teeth, which gradually increasing, sets up an irritation, causing the tooth-socket to become absorbed. Again, we have cases where the sockets of the upper and lower molers and bicuspids become gradually absorbed, causing a great deal of suffering, even sometimes toothache, as the gums recede with the receding process, exposing the sensitive dentine beneath, which continuing, results in the loss of the affected teeth. Such cases are met with where the individual is an excessive tobacco-chewer, and also you find it the resultant of the abuse of mercury where the patient has been ptyalised.

Various occupations are directly or indirectly injurious, as caries is very frequent among cooks and confectioners, simply from the amount of sugars and other substances that enter into the diet, accumulating with the mucous of the gums upon the teeth, producing an acid fermentation.

Richardson in his lecture, states that caries is exceedingly common among the fur-dyers, since nitric acid is used for cleaning and imparting a yellow color to the fur; and that the fumes of this acid acts upon the teeth and moreover occasions a dryness, irritating the mucous membrane of the tongue and fauces and likewise perverting the normal reaction of the saliva. The teeth lose their enamel and occasianally are entirely destroyed.

The foregoing remarks represent the many conditions to which the tooth is exposed and in a manner convey with them the idea of what would be the most serviceable treatment for the prevention of caries. The most conspicuous cause in all the cases cited above is in the modification of the saliva; consequently the prophylactic means should be directed to the saliva and to the various conditions of the mouth. They should consist in the removal from the teeth, all destructive agents that may be brought in contact with them and in the neutralization of any chemical reaction that might be harmful.

To elucidate the preceding, let us take an individual suffering from any of the acute febrile affections. In the first place, we have, as we all know, a complete suppression of the salivary secretions and a deposit upon the surface, of the teeth and tongue, hardened masses of mucous. Now, should its removal be neglected, or as is the general rule, that absolutely no attention is paid to it, we find at the moment of convalescence, when we remove these masses, the teeth are covered with carious spots or furrows, and in some instances the caries has progressed to such an extent as to place the teeth beyond the vale of redemption—the result of either neglect or ignorance, and in either case, equally culpable is the individual upon whom the responsibility of their preservation devolved.

The dentist is never consulted in such cases, until the patient after suffering days and in some instances, weeks, intense agony, comes anæmic and emaciated, relating how much he suffered and how many sleepless nights he passed, to have some aching teeth extracted. The same individual will tell you that prior to this last attack, he never knew what it was, to have an aching tooth.

Among children, the case is more serious. To see these little ones suffering, and especially where extraction has to be resorted to, knowing that the very remedy for their relief will be most apt to entail upon them future misery, is sad indeed. In these cases, the care of the teeth is entrusted to the attending physician alone and he should exert his best efforts to preserve them. No consideration whatever should so absorb his attention as to neglect to give to them their proper share. From

the beginning of an attack of this kind, the mucous accumulations should be daily removed from the teeth, which can be readily accomplished by means of a tooth-brush or a small stick covered with some prepared chalk, followed by an alkaline gargle to be repeated several times a day.

All chronic diseases, dyspepsia, intestinal troubles and particularly during pregnancy, the teeth deserve special attention. I would advise the strictest regard to cleanliness and a *constant* use of lime water.

Care should be observed in the administration of all acid medicines and in every instance they should be followed by an alkaline wash.

There is no substance more frequently used and which exerts so deleterious an influence as alum. Nearly all gargles given in the treatment for all inflammations of the mouth and pharynx contain it. It is also the substance which makes the majority of the patent cosmetics and dentrifices attractive, as it has the property of giving at first a glossy whiteness to the teeth, which is unfortunately of short duration. Alum should never be used so long as it has such excellent substitutes as borax, chlorate of potash, the neutral perchloride of iron, etc.

The excessive use of sugars, and especially in those forms in which it is allowed to dissolve slowly and to remain a long time in the mouth. These remarks also apply to acid foods and unripe fruits. All acid reaction in the mouth, from whatever cause, should be corrected.

I prefer the use of lime water to prevent fermentation and to neutralize any morbid condition of the saliva. Should objections be made to the taste, chlorate of potash, bicarbonate of soda or magnesia might be substituted; but, in any case, by the addition of some strong aromatic they can all be made quite palatable.

Nothing answers better as a dentifrice than prepared chalk, as it is alkaline and has sufficient grit to remove the accumulation upon the teeth.

Having in the foregoing reviewed the subject in hand in so brief a manner as not to overtask your patience, but I assure you, less adequately than its importance demands. My object

has been to show that decay is the result of an acid reaction of the saliva in the mouth, and I would feel rewarded for my labors, if I could impress upon the minds of all, the great urgency of maintaining the mouth in a perfect state of cleanliness—that virtue next to godliness. I would recommend conformity to the card of directions regarding the care of the teeth, issued by the Medical Committee of the National Dental Hospital, London, viz.: 1st. The teeth should be cleaned at least once a day, the best time being night—last thing. For this purpose use a soft brush, on which take a little soap, and then some prepared chalk, brushing up and down and across. There is rarely any objection to the friction causing the gum to bleed, slightly. 2d. Avoid all rough usage of the teeth, such as cracking nuts, biting thread, etc., as by so doing even good, sound teeth may be injured.

3. When decay is first observed, advice should at once be sought. It is the stopping in a small hole, that is of the greatest services, though not unfrequently a large filling preserves the tooth for years.

4. It is of the greatest importance that children from four years and upwards, should have their teeth frequently examined by the dental surgeons, to see, that the first set, particularly the back teeth, are not decaying too early; and to have the opportunity of timely treatment for the regulation and preservation of the second set.

5. Children should be taught to *rinse* the mouth night and morning, and to begin the use of the tooth-brush early (likewise the tooth-pick).

6. With regard to the food of children to those who are old enough, whole meal, bread porridge and milk should be given. This is much more wholesome and substantial food than white bread.

7. If the foregoing instructions were carried out, comparatively few teeth would have to be extracted.

8. Those who do not seek nor receive hospital aid are recommended to consult qualified practitioners, and not persons who advertise by show-cases, puffing advertisments, etc.

The above directions must present themselves to the family physician with peculiar interest, as it is under his observation, the first evidence of decay must appear. His duty requires—his conscience demands his best efforts to check the impending evil. He is, as it were, a self-constituted sentinel in the watch tower to warn and avert any and all dangers which may threaten the sanitary welfare of humanity. Let him rise to that "higher life" which exacts the exercise of his abilities for the prevention rather than the cure of the disease. Let him also cooperate with the specialist in every thing that contributes to the well-being and improvement of the human race, and generations yet unborn will attest the wisdom of such an action.

Current Medical Literature.

GYNÆCOLOGY, VIEWED BY A GENERAL PRACTITIONER.

Although gynæcology is acknowledged as a true specialty, it must be admitted that it occupies towards general practice a very different position from that of ophthalmology. It is allied so closely to obstetrics, which of necessity, till the very constitution of things is altered, must form a prominent part of the family physician's work, that it is hard to draw the line and say how far the general practitioner should intrude himself upon the gynæcologist's field, or, more properly, how far the gynæcologist should be allowed to usurp the field already occupied from time immemorial by the family practitioner. At what point shall the latter stop? Certainly he must know enough to perceive the necessity for recommending his cases to the specialist; and between the knowledge requisite to diognose a uterine displacement and that required to rectify it by a properly-adjusted pessary is but a small step; and in local congestions, erosion of the cervix, menorrhagia, leucorrhœa, the use of the curette, and applications to the cervical canal, and even to the fundus uteri—at what point is he to pause?

Perhaps the greater operations—the removal of tumors, polypi, fibroids, and ovarian cysts, the cure of fistulæ and lacerations—would about cover the field of the gynæcologist, and indicate the point where the family doctor could leave his patient, having seen her safely there, in the hands of the great man. But the specialist is not by any means disposed to limit his practice in this manner. He claims the right to be considered an expert in obstetrics on occasion, and considers him-

self as the only proper custodian of all cases of uterine disease; nor do his large fees leave the usual attendant any chance, for where the circumstances of the patient are too limited to admit of such payment he offers the facilities of his free clinic or dispensary, with the ægis of his great name.

In rural practice, of course, the specialist is not so accessible, but it is a mean city to-day which cannot boast of at least one skilful gynæcologist, and the already narrowed field of practice on which, it seems, we general practitioners have been squatting since the time of Hippocrates is being rapidly claimed and enclosed by these lords of the soil, till at last it may happen that the whole class of general practitioners will be evicted to make room for still more enterprising claimants, who will divide and subdivide till, by retributive justice the holdings will become too small to support their occupants. Then the specialist who removes ovarian tumors will sullenly glare at him of the uterine fibroids, and the wielder of the tenaculum come to blows with him of the curette.

But to avert that dreadful day it behooves each practitioner to fit himself as much as possible for advanced gynæcological work, that the patient, if she by evil chance break forth from his hand uncured, may at least have paid him tithe before she goes. To acquire this knowledge requires both courage and industry. Only those especially favored by circumstances and location can enter again upon a student's career, and books must therefore afford them the information which the graduate of to-day has almost unconsciously imbibed.

The books that are to supply the stone for these defensive fortifications are not far to seek: they are furnished by the enemy himself. They should be, not the work of a novice, who teaches himself as he writes, nor the product of the book-maker, who sees in publication a rapid step to reputation, nor even the labored compilation, or the elaborate treatise of the scholar, but books which are the mirror of the daily work, the the daily and hourly experience and expedients, of a practical master. The new edition, so fresh that it yet reeks with the odor of the printing-room and the bindery, of the treatise by Prof. Thomas, of New York, might well furnish the material for the first line of intrenchments, whilst to the inner citadel might be assigned the "Lessons in Gynæcology," by our fellow-townsman, Dr. Goodell.

Lay deep, then, O brother-practitioners, the foundations of that knowledge which shall be our sure defence against that spectre, whose name is Gynæcology, which now confronts us in the doorways of our choicest patients.

> "A formidable shape:
> The one seemed woman to the waist, and fair;
> But ended foul in many a scaly fold,
> Voluminous and vast, a serpent armed
> With mortal sting."

—*Philada. Med. Times, Nov.* 20.

COD LIVER OIL IN EPILEPSY.

Dr. Fairbairn, of Brooklyn, N. Y., writes: The digestive disorder and annoying and disfiguring eruption which result from taking the bromides in large doses for a length of time, are serious disadvantages connected with the administration of these salts. A remedy which will prevent the bad effects of a medicine, and at the same time will rather aid than detract from its good effects is certainly a valuable one. I think in this case we have such a remedy in cod liver oil.

A young lady suffering from epilepsy has been under my care for the past five months, who has taken bromide of potassium in large doses for nearly a year, and by this remedy cod liver oil has warded off the above troublesome results. The mode of taking it was this: Brom. potas., ℥ ss., was taken thrice daily after eating; this was followed one hour after each dose by ol. morrhuæ, ʒ ss. When first attacked by the malady she had eight convulsions in twenty-four hours. She began the bromide in ℥ ss. doses, but was compelled to stop it on account of the gastric derangement. A friend recommended the cod liver oil. She resumed the bromide, adding the oil, and has taken it without further trouble since. The eruption, before profuse, disappeared under this management. The disease has been well controlled, only four convulsions having occurred in the past seven months. I doubt not that the cod liver oil has had its share in the direct benefit done to the nervous system, besides affording a protection from the irritating salt to the coats of the stomach. In summing up the good effects of the oil I find: 1st. Absence of the digestive disorders; 2d. Absence of the acne eruption; 3d. That the anæmia, usually found in persons taking this medicine continually, is far from being marked; 4th. The body is better nourished, and appetite unimpaired. I have made trial of this treatment in other cases, with similar good results. As the articles that have appeared in your journal, in the past month, on the bromides, have made no mention of this device, I have been led to write the above.—*N. Y. Medical Record*, Dec. 11.

ANTHROPOMETRY.

The necessity for the proper physical development of our youth being conceded, the necessity of a reliable standard according to which to judge of the child's growth, naturally follows. Dr. Percy Boulton, in an article in a recent number of the *Lancet* gives the result of some very extended observations having the establishment of such a standard in view. In conducting his measurements, etc., he recognized the truth of Quetelet's conclusions:—1. That there is a perfect form or type of man, and that the tendency of the race is to attain that type. 2. That the order of growth should be *regular* towards that type. 3. The variations from the type follow a definite law, the law of accidental causes. With these conclusions be-

fore him, the immediate object of his observations was to decide: 1. The rate of growth per annum of average healthy children. 2. The weight for height. His method differed from that of others who have sought to determine the physiological height and weight of children at various ages, in that instead of striking an average from the measurement and weight of a large number of children, he weighed and measured a smaller number, at least once a year, and has kept records of the results extending over a space of ten years. The children were those of healthy, well-to-do parents, brought up with suitable food and surroundings, giants and dwarfs being excluded.

The table which Dr. Boulton has drawn up may, therefore, be regarded as a typical standard for weight and height, and as it should be our aim to see every unit of the population brought up to the maximum of healthy development, this table will be found a reliable guide. As the masses of figures that have had to be digested in drawing up this table would be dry and difficult to follow, only the results are given:

"The fact that different healthy children grow at different rates explains the circumstance of varying height in healthy individuals. I find that average English children brought up under favorable circumstances grow from 2 to 3 inches a year. A growth of less than 2 inches or over 3 should excite apprehension. The former would indicate arrested development, and the latter a rate of growth beyond the powers of average children. Rate of growth should be regular, and being so, prognosticates future stature, because the healthy child that grows 2 inches a year passes 5 feet at about fifteen, which indicates a short stature (i. e. if a male about 5 ft. 6 in.; female, about 5 ft. 1 in.). The healthy child growing 2½ in. a year is 3 ft 2 in. at three years, and passes 5 ft. at thirteen to fourteen years. Such child will be a medium-sized adult (i. e. if a male, about 5 ft. 8 in.; female, about 5 ft. 3 in.). The quick-growing, healthy child that accomplishes 3 in. a year passes 5 ft. at ten or eleven, and eventually makes a tall adult (i. e. if a male, about 5 ft. 10 in.; female, about 5 ft. 5 in.). So rate of growth might be likened to three trains travelling at, say, ten, twenty, and thirty miles an hour; the fastest train, of course, covers the most ground in a given time, subject somewhat to the exact point where puberty puts on the brake, which at first slows, and ultimately stops the progress altogether. Of course, one meets with many variations, but these variations are, I believe, always abnormal. Some children seem to do their growing by fits and starts, the common diseases of children arresting for the time progress, which is made up for afterwards by a supreme effort. Such growth is unnatural, and often very detrimental. I believe, then, that every healthy child has its own regular rate of growth of 2, 2½, or 3 in. a year, from which it has no right to vary more than ¼ in. a year.

Next as to weight for height. Whether a child grows 2, 2½, or 3 inches a year, weight for height should be in each case identically the same, and all healthy children should grow broad in proportion to their height. Between 3 and 4 feet the increase in weight should, I find, be 2 lbs. per inch, and between 4 and 5 feet, 2½ lbs. per inch.

I do not wish to be thought that the table which I offer as a standard is a precise statement of what has come out of my statistics. I wish it to be understood that statistics do not accommodate themselves to the regularity of half pounds, as found in this table. An observant and accurate statician may, however, very easily lay down a law from the facts and figures which he has to deal with. It is a fact that my statistics came out 36 lbs. for 3 feet, and 60 lbs for 4 feet, and 90 lbs. for 5 feet, ands having found 2 lbs per inch to be the normal increase between 3 and 4 feet, and 2½ lbs. per in. between 4 and 5 feet, the rest naturally follows, and has proved a reliable approximate working standard:

Feet.	In.	lbs.
3	0	36
3	1	38
3	2	40
3	3	42
3	4	44
3	5	46
3	6	48
3	7	50
3	8	52
3	9	54
3	10	56
3	11	58
4	0	60
4	1	62½
4	2	65
4	3	67½
4	4	70
4	5	72½
4	6	75
4	7	77½
4	8	80
4	9	82½
4	10	85
4	11	87½
5	0	90

Some children exceeded these weights that are by no means giants; and really healthy, well-nourished children of healthy parents and favorable surroundings generally attained these averages. But what of children that fall below the standard? I find that there is a 7 lbs. margin of safety, and that children falling more than 7 lbs. below this standard are devoid of reserve capital on which to draw, and consequently they succumb quickly to many constitutional diseases. This, therefore, may be called the preventive medicine margin, beyond which lies the dangerous land of cachexia.

Arrest of growth, or loss of weight, preeedes so many diseases, that it may be looked upon as a danger signal, and if the "caution" is noticed before the disease point is reached, catastrophe may frequently be prevented, and so childhood may be worked on a kind of "block system." It is thus that it becomes of such value in preventive medicine.

In pulmonary consumption loss of weight generally precedes cough, and according to Dr. Dobell's table No. 4, hæmoptysis only occurred 8 times out of 100 cases before loss of weight had been noticed. Moreover, while cough is a symptom at once recognized and noticed, loss of weigtht is so insidious that it is apt to go some time unnoticed. The number of cases in which loss of weight began before cough is sure to be understated. These remarks apply more strongly to the cases in which loss of weight preceded first hæmoptysis—a symptom never overlooked.

The following from Dr. Boulton's paper is commended to the consideration of our common school boards:

Our school boards might become a great power for the physical improvement of our rising population, if some of the monstrous sum expended in teaching our laborers and servants of the future the rudiments of science, mathematics, and German, were utilized during school vacation in sending the undersized to the country under the care of their teachers, and opportunity were afforded them to become physically strengthened by judiciously regulated diet, plenty of exercise in the fresh air, &c.; if, in short, a little less were done for the *mens sana* and a little more for the *corpore sano*. It is perfectly wonderful what only three weeks of change to the country has been found to do for town children thus treated in Saxony. In Switzerland and America the children are placed in the families of farmers, who take charge of them for a small sum—a system of "farming out" not as yet known, I am sorry to say, in this country.

The medical inspection of schools which has been instituted in the department of the Seine is a step in this direction which might be imitated in this country with advantage, and I would strongly urge the triennial use of the scales and measure as the most trustworthy indicators of the physical welfare of the rising population. There is little doubt that the mental pressure which is now so common in elementary schools causes an excessive waste of nerve force for mental work, which should be subservient to bodily growth and development. Mental overstrain is most common amongst the poor who suffer from want of food and bad hygienic surroundings, but it is not uncommon amongst the growing children of the rich; and it is important that parents should be aware of the possibility of sacrificing physical to mental development. The reverse may certainly occur, the result being a fine but not very intellectual animal; and therefore in this, as in most things, it is the "happy medium" that is the best and safest.—*Michigan Medical News*, Dec. 10.

XYLOTHERAPY.

We have had "metallotherapy," and now foreign medical journals inform us that at a recent meeting of the Société de Thérapeutique, M. Dujardin-Beaumetz read for Mr. Jourdans a note of the æsthesiogenic properties of certain woods applied to the skin, which he calls xylotherapy. M. Jourdans has applied plates of wood to the insensible skin, and as with plates of metal, magnet, sinapisms, and blisters has obtianed a return of sensibility. The application of wood seems to be more active than the other means. All woods do not act with equal intensity, and with regard to their efficacy may be classified in the following order: cinchona bark, thuja, rosewood, mahogany, pitch pine, walnut, maple, aple; poplar, ash, and plane produces no effect. Return of sensibility is accompanied by congestion of the skin. We cannot suppose these phenomna to be caused by electric currents.—*Michigan Medical News*, Dec. 10.

Buchanan, the notorious diploma vender, has, after all, failed to receive his deserts. The charge upon which he was arrested, it will be remembered, was "using the mails to defraud." After hearing the testimony Judge Butler directed the jury to acquit the prisoner upon the technical ground that there was no evidence to sustain the charge. He held that Buchanan did not defraud his correspondence for they knew as much of the fraud as he did. The purchaser of the "diploma" was simply buying a document on the strength of which he intended to defraud others. This is certainly an ingenious defense, but doubtless, strictly legal, and the hoary headed old impostor (and yet the law, marry, says he is not an impostor) is again at large. It is to be hoped, however, that some means will be devised to put a stop to his villainy.—*Michigan Medical News*, Dec. 10.

SOME OF THE ERRORS IN THE DIAGNOSIS OF EYE DISEASES INTO WHICH GENERAL PRACTITIONERS ARE MOST APT TO FALL.

By SAMUEL THEOBALD, M. D.

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It is not surprising that physicans who have not devoted especial attention to the study and treatment of diseases of the eye, when called upon to undertake their management, should often be at fault in their efforts to reach a correct diagnosis, since even the most skilled specialist in this department of surgery, if deprived of his ophthalmoscope, of his case of trial glasses, and of his test types—aids which the general practitioner of medicine rarely, if ever, has at his command—would feel himself incompetent in a very considerable portion of cases, to pass beyond the region of guesses and conjectures, and to

reach a conclusion which would be more than approximation to the truth. That the physician in general practice should do better is not to be expected. I trust, therefore, that the selection which I have made of a subject for discussion this evening, will not be regarded as presumptuous, and that I shall be acquitted of any intention of overstepping the bounds of good taste.

If the error to which I would direct attention, or the consequences which result from them, were always remediable, their occurrence would be a matter of less moment, but unfortunately too often this is not the case. When an attack of glaucoma, or of iritis, unrecognized in its early stages, is allowed to run its course unchecked, the integrity of the eye commonly suffers an injury which the most consummate skill will not suffice to repair.

It will, perhaps, surprise some of those who are present, to learn that I place the two affections just named among the diseases of the eye regarding which errors of diagnosis are frequently made: and yet I am sure anyone who has had considerable experience in ophthalmic practice will justify me in doing so. Upon two occasions I have had patients brought to me almost absolutely blind from glaucoma, which had been mistaken for cataracts by the family physician. In each instance delay had been counselled, so that the cataracts might become thoroughly ripened, and in each, as a consequence of this advice, total loss of vision resulted. The cases in which glaucoma is treated as a simple inflammatory affection, until the progress of the disease has put an end to all hope of vision, are of much more frequent occurrence.

In its incipiency, glaucoma is not always easy of detection, even with the aid of a ophthalmoscope; but when fully developed its characteristics are so pronounced that its recognition is a matter of no difficulty; and to confound it with cataract is certainly inexcusable. The marked pupillary reflex from the vitreous humor, and at a later stage the clouding of the lens, may naturally suggest cataract; but the occurrence of pain, which at times manifest itself in almost every case of glaucoma, and the presence of subconjunctival hyperæmia, which is rarely altogether absent, should warn us, at least, of the existence of other complications. Acute glaucoma there would of course be no likelihood of confounding with cataract.

The essential feature of every variety of glaucoma is an increase in the tention of the eyeball; and for this symptom, whoever undertakes to treat diseases of the eye should always be on the lookout. Even to those who are not especially versed in the investigation of ophthalmic affections, the recognition of considerable changes in the tention of the ball is not difficult, if the investigator will use one of his own eyes, or the healthy eye of the patient, if he have one, as a standard of comparison—the examination being made by directing the

patient to look down, and simply feeling the firmness of the ball, through the upper lid, with the forefingers.

Whenever an increase of tention is ascertained to exist, glaucoma should be suspected; and when additional pain and dimness of vision are complained of, its existence is almost established; and without delay the ophthalmoscope should be appealed to, to set at rest any remaining doubts.

The failure to recognize the presence of iritis is, I think, a more reprehensible mistake than the one of which we have spoken, although the consequences which result from it are less disastrous. The usual mistake is to confound this disease with conjunctivitis, and to treat it, therefore, by the application of astringents instead of atropia; and for this error, it seems to me, the books are in some measure to blame, because of the undue importance which they attach to the difference in the charcater of the injection of the eye, as a distinguishing feature, in these two affections. If in conjunctivitis only the superficial vessels were congested and the deeper ones were never involved, or if in iritis the hyperæmia of the deeper vessels never extended to those of the conjunctiva, doubtless this difference would be a point of great diagnostic value; but, as a matter of fact, this exact definition seldom obtains, so those who trust to it for guidance are as likely as not to go wrong.

Whenever with conjunctival or subconjunctival injection pain and photophobia exist, especially in adults, the state of the irris should be carefully examined. Sometimes the swollen and muddy condition of its tissue will show us at a glance that iritis is present, but more often, especially in the early stages of the attack, we shall discover no such certain guide. Let us then first examine the mobility of the pupil. And to do this properly the patient should be placed in front of the window, with his face to the light, and one eye should be closed and covered with the hand. The eye to be examined should then be screened from the light, for a few moments, by the interposition of the hand of the examiner, and then, upon its sudden withdrawal, the action of the pupil should be carefully noted. If iritis by present, the pupil will dilate but little, if at all, during the exclusion, and so, when the hand is withdrawn, there will be but slight if any responsive contraction to the stimulus of the light; whereas, in conjunctivitis, we should find the normal activity of the pupil in nowise impaired. A definite knowledge of how the healthy iris behaves under such circumstances may be of great assistance, and to everyone is well worth the little trouble which is necessary to acquire it.

Should this test leave us in doubt as to the existence of iritis, we have two others to fall back upon, which are still more conclusive—the examination by oblique illumination and the instillation of atropine.

Doubtless it would be a most excellent thing if every physician could be an accomplished ophthalmoscopist, but to my

mind this is quite impracticable, and so I do not deem it worth while to recommend it. With the use of oblique illumination, however, which simply means the examination of the structures of the eye, as far back as the anterior layers of the lens, by means of artificial light, concentrated and thrown obliquely upon the eye by a lens of two or three inches focus, it is entirely different. With this simple procedure every intelligent physician can and should familiarize himself. A room from which the light of the sun can be excluded, a candle, a lamp, or a steady burning gas light, and a biconvex lens of, say, two and a-half inches focus, are all the paraphernalia necessary; and to employ these intelligently, but very little practice is required. The great assistance which this method of examination affords in the investigation of very many conditions of the eye, can scarcely be realized by those who have not familiarized themselves with it. In searching for foreign bodies, whether lodged upon or in the cornea, the iris, the lens, or within the anterior chamber; in ascertaining the presence and character of opacities in the cornea or anterior portion of the lens; in examining corneal abscesses and ulcers; in investigating the condition of the iris and the pupil, the presence of hypopion and of anterior and posterior synechiæ; in all these conditions, and in many others which at the moment do not occur to me, the aid which we derive from oblique illumination is indeed of incalculable value.

In the disease under consideration, we shall, by this method, very often be able to discover changes in the iris tissue or turbidity of the aqueous humor which otherwise would have escaped detection, or to make out pupillary adhesions which before we had only suspected.

In regard to the instillation of atropine, the rule of whist as to tricks, when in doubt, should be our guide. If there be any uncertainty as to the presence of iritis, by all means make the application and dispel the doubt. If the iris be free from disease, no harm will have been done; but, in order that the dilatation of the pupil be not inconveniently prolonged, it would be well that the strength of the solution employed should not exceed one grain to the ounce. On the other hand, as the pupil dilates, points of adhesion between the iris and the capsule of the lens are often brought to light, which previously could not be detected; and thus the diagnosis is established beyond question, and the irreparable mischief which would have resulted from the extension and consolidation of these adhesions is averted.

As might be expected, the optical defects of the eye supply many stumbling blocks to the general practitioner—myopia, hypermetropia and astigmatism, each affords its quota. Although, nowadays, most physicians are prepared to ascribe to these anomalies of refraction *defects of vision*, which they cannot otherwise account for, comparatively few of them realize

how many of the obstinate cases of weak eyes, of conjunctivitis, of blepharitis, and even of frontal headache, in which all of their usually successful remedies are tried in vain, are due to the same causes, and can be relieved only by properly selected glasses. From my note books I might cite very many cases to prove the truth of this assertion, but I will not weary you with the reiteration which such demonstration would involve. Permit me, however, in lieu thereof, to offer this suggestion: Suspect refractive errors, not only when you meet with defects of vision which otherwise are inexplicable, but whenever you encounter intractable cases, of asthenopia, of chronic conjunctivitis or blepharitis, or of frontal headache, aggravated by the use of the eyes for near work; and when the improvement you expect does not follow the usual remedies, bear in mind that, until glasses have been tried, the armamentarium has not been exhausted.

From failure to detect the presence of foreign bodies lodged upon the external surface of the eye, or beneath the lids, odd mistakes sometimes occur. Upon one occasion, a patient, who came to me with a portion of the shell of a minute seed stuck upon his cornea, where it had been lodged for several days, causing much irritation and injection of the neighboring blood-vessels, told me that, before it had been determined that he should consult a specialist, the advisability of placing him under the influence of mercury had been seriously debated by his medical attendant, who, of course, had no suspicion of the true character of the trouble; and in another instance, there fell into my hands a less fortunate patient, who, with a foreign body similarly located, had been subjected to a series of nitrate of silver applications, for the relief of his supposed ophthalmia. If the method of examining the eye by oblique illumination, of which I have spoken, was more generally understood and practised by medical men, such errors as these would be of far less frequent occurrence; although, sometimes, as in the first of the two cases mentioned, the true character of the trouble is not easily detected, even by a careful observer.

Occasionally, cases of conjunctivitis, and even keratitis, are subjected in vain to a long course of treatment, because their dependence upon nasal duct strictures and blenorrhœa of the lachrymal sac is overlooked. Of course, under such circumstances, the first thing to be done is to cure the strictured canal, and this can almost always be accomplished by the use of lachrymal probes of sufficiently large size. When obstruction of the nasal duct exists, pressure upon the lachrymal sac, with the point of the finger, will in most instances demonstrate its presence by causing regurgition of tears or of muco-purulent matter through the puncta. This simple procedure, therefore, should never be neglected, when there is the slightest reason for suspecting this complication.

The confounding of catarrhal with phlyctenular or scrofu-

lous ophthalmia, and as a consequence the use of astringents when atropia and yellow oxide of mercury are indicated, and, latterly, of atropia when astringents should be employed, is another error of not infrequent occurrence. The best way to avoid this mistake, which may lead to serious consequences, is to bear in mind, that in catarrhal ophthalmia the cornea is not involved, the redness is diffuse, and there is but little photophobia or lachrymation; whereas in scrofulous inflammation the cornea is involved more often than not, and there is usually great photophobia and lachrymation, and the redess, if not literally circumscribed, is at least more pronounced in the neighborhood of the phlyctenulæ. The general condition of the patient will also be an indication for our guidance; and we should remember, moreover, that scrofulous ophthalmia rarely manifests itself in adults, except when the integrity of the eye has been impaired by the occurrence of similar attacks in childhood, whereas, to catarrhal conjunctivitis, they are perhaps more prone than children.

Possibly there may be a few other sources of error which might be mentioned in this connection, but I do not deem them of sufficient importance to justify me in trespassing longer upon your patience, and so, as a reward for your toleration thus far, I shall forbear entering upon their consideration.—*Maryland Medical Journal*, Dec. 15th.

THE REAL CAUSE OF THE MIASMATIC CONTAGIOUS PHTHISIS PULMONUM TUBERCULOSA AND CHRONIC PNEUMONIA AND THEIR PROPHYLAXIS.

By DR. F. ECKLUND, STOCKHOLM.

[Translated and condensed by B. C. Anderson, Missouri Medical College.]

With the advance of our knowledge, the truth seems to be that the real cause of phthisis is an irritant, and that a positive difference exists between the real contagious phthisis pulmonum tuberculosa (which must be ascribed to the presence of specific parasites), and the cheesy, scrofulous infiltrations or chronic pneumonia. The dispute between Laennec, Waldenburg, etc., on the one side, and Villemieu, Jaccoud and Virchow on the other, is by no means settled. I have made microscopical investigations to verify my suspicions that the sputa from real phthisis patients contain specific and characteristic elements different from those of the cheesy pneumonia. This suspicion I have had the sad satisfaction to find well founded. For this purpose I have had at my disposal both hospital and private patients, and have obtained fresh sputa and urine twice a week. I ascertained that the sputa of real phthisis (which to a certain degree must be considered as a true expression of the changes in the lungs) contain, besides other matters, *three* specific and characteristic cell forms, numerous in proportion as the disease

is graver or more advanced, viz.: 1st. Small, round lymphoid cells, generally entirely filled with phthisis bacteria. 2d. Round cells with from 3 to 5 nuclei, cells as large as pus, mucus or white blood corpuscles, either filled with bacteria or partially so. 3d. Elliptical and egg-shaped cells, larger than those described under No. 2. Besides, there are found remains of phthisis bacteria, fragments and shrunken cells, *i. e.*, Lebert's tubercle cells, elastic threads, detritus, etc. I may remark here that Biermer in '*Die Lehre von Auswurf*,' Würzburg, 1855, page 5, very pointedly warns us against confounding the movements of the remaining molecules of destroyed cells with the movements of infusoria.

It behooves me now to prove that specific bacteria exist in the phthisis cells (which bacteria also exist in the intercellular fluid), in contrast with pus and mucus cells and such as contain free fat.

What strikes us especially at first sight is the very active, raging life within these cells. If, for instance, only two or three micrococci, which are in shape spherical or slightly cylindrical and perfectly hyaline and glistening, exist in a cell, we see how they vibrate from side to side and against each other, precisely as if they were wrangling over their food and trying to steal nourishment from each other.

If, again, the cells are entirely filled with micrococci, then a pandemonium exists compared with a snake-pit, and a furious fight seems to be going on.

When we observe that micrococci are of noticeably different sizes, we cannot conclude otherwise than that they take up nourishment from the cells and intercellular fluids and *grow ;* and when again we see how those which are alone and in a free state, are very lively in their movements, but when they lie two and two together are quite still, we may suppose that a division (segmentation) has taken place, or, in other words, that they are in their nature schizomces. These bacteria (Micrococcus Phthisis Dryotemenos) are much smaller than those of leprosy. In order to establish the fact that these bacteria are not to be found in healthy persons, nor in the various secretions of persons suffering from catarrh, etc., etc., I have, of course, made comparative investigations and employed chemical re-agents in order to avoid confusion or mistake. For instance, on trying to dissolve them in ether, in the prescribed manner, I have found them to continue their movements as well *after* as *before* the treatment; also that in contrast with other bacteria and the different histological elements, they are not colored (or at least very slowly and imperfectly so) by anilin-red in solution. By virtue of my investigations compared with our present knowledge of physiology and anatomy, I conclude that these cells are not a normal part of either the salivary-gland secretions or of the bronchial, Schneiderian membranes, etc.

In conformity with the views now held, warmth can be con-

sidered as a result of molecular movement. M. Peter and Mealdowie have in their investigations of phthisis patients, found the temperature of the chest increased locally, and if the physical examination has established one of the lungs principally involved, the local temperature of said side has also been found to be increased.

The theory of irritating parasites as the real cause of the contagious consumption establishes satisfactorily this increase of temperature of the chest.

The following deductions are made from clinical cases :

That no antagonism exists between consumption and malaria.

That the micrococci in phthisical patients are often also to be found in the kidneys and even in the red blood corpuscles.

That no micrococci are found in patients suffering from chronic pneumonia *vel scrofulosis.*

That persons suffering from chronic pneumonia easily become phthisical by inhaling air that contains micrococci and by reason of their debility are not able to throw them off as in the case of healthy persons.

It is not my duty to establish the source from which the micrococci are derived. I can not admit that they are generated spontaneously by the lung diseased, less so, that they occur at the birth of every person and exist as a part of the natural tissues, but that they are derived from without. I have collected from different places in Sweden where consumption is prevalent, earth, mud, water, decomposing vegetable and animal material, from shallow lakes and sea-coasts, and have found by microscopical examinations constantly existing micrococci identical with the phthisis bacteria; thus showing that they are of miasmatic origin.

Proof that the real phthisis is a contagious disease is amply illustrated in military barracks, where men are rather crowded and allowed to breathe air that is contaminated by phthisical persons (through dried sputa, etc.).

As regards the prevention of the miasmatic contagious consumption, and at the same time the chronic pneumonia in toto, I will only invite attention to a few points.

The necessity of dry ground by means of deep and large porous tile-pipes in the ground under and about the dwelling-houses, and of isolating the foundation and walls of houses by means of asphalt, cement, etc., from under, and around-lying grounds, to prevent its contamination with decaying organic matter.

To lead the ground air through chimneys from rooms, halls, etc.

To isolate one story from another.

In short, to be surrounded by the best known hygienic precautions.

To isolate phthisis-patients from healthy persons as much as possible.

In conclusion, to avoid everything that weakens the body and mind, such as drunkenness, nicotin, sorrow, trouble, over exertion, and especially cold and lung inflammations.—*St. Louis Courier of Medicine*, December.

"FEMALE WEAKNESSES."

Dr. Clifton E. Wing, of Boston, has contributed a very suggestive paper to the effect that certain "methods" of singing are a source of certain uterine troubles. In his paper he describes several cases in which he found displacements of the uterus, with disturbed menstruation and painful conditions of the pelvic region; and in all this group of patients there was the coindence that they were pupils of vocal music practicing what singers understand as the "abdominal method."

The reading of Dr. Wing's article has been of great interest to us, and we are very much impressed with the force of its suggestions; we add one or two extracts from the paper to enforce its points:

Lately I have talked with a number of ladies, and have been surprised to find how many of those acquainted with the subject, on my mentioning the matter to them, have at once said that they had no doubt whatever that the method was often injurious. Several had attempted it themselves, and finding that they did not feel so well after it had given it up. Others knew of its bad effect upon friends. From one lady I got the following story: Five women were taking instruction from one teacher at the same time. One, previously well, gave out entirely, and was afterward treated for uterine displacement. A second, after four weeks of practice, began to have leucorrhœa and pain upon walking, symptoms she had never before had. In two others dysmenorrhœa made its appearance, when formerly menstruation had been painless. The fifth one—the only one of the five who went through the process without developing more or less of what are in general terms called "uterine symptoms"—became a good singer, and is now teaching the method to others.

NOTE.—Since the foregoing was written another instance, which is worth reporting, has come under my observation. In the course of my inquiries I was told by a patient that one of her lady friends—with whom it so happened I was acquainted—knew all about the subject, having taken intruction in elocution (which, by the way, appears to have been "quite the rage" of late), in the course of which she was taught "*the proper method of abdominal respiration*," and she agreed to tell her that I wanted information about it. A few days later I met the lady on the street. She told me that my patient had spoken to her, and she kindly volunteered to call at my office at some future time and talk with me upon the subject, expressing herself as quite sure that my patients had not acquired the "right

method," and that all their troubles were due to this fact. I saw nothing more of the lady until a few days ago, when, going to my office in the morning, I found her awaiting me. Supposing, of course, that she had come to give me the desired information, I was very much surprised to hear that she wished to consult me professionally. She was a lady of unexceptional muscular strength, of which she was rather proud; was fond of gymnastic exercises, and had taken much interest in "abdominal breathing." This latter she had lately practiced quite assiduously in connection with her elocution. She had the mistaken notion—previously referred to—that it would tend to strengthen the "muscles which support the womb," and thus be rather a safeguard against future uterine trouble. The week previous she had practiced the method a certain length of time on four successive days, feeling on each occasion a "pulling in the back." The fifth day she became used up, and could not go through the exercise. Since that she had become sleepless and very nervous, and remembering her conversation with me on the subject concluded to consult me at once. *I found a marked prolapse of the womb, the cervix being very near the vulva.*

As the result of her experience the lady has changed her opinion, and intends to give up elocution and the abdominal method."—(Cincinnati) *Obstetric Gazette*, Dec.

ATROPIA IN CHLOROFORM NARCOSIS.

We find this subject but casually referred to in treatises on anæsthetics. It has, however, been worked out by Professor T. R. Fraser, of Edinburgh, who has shown atropia to be a cardiac stimulant, advisable when chloroform is to be given. It stimulates the heart, not only indirectly, by lowering the conductivity of the cardiac terminations of the vagi, and thus, of course, diminishing their inhibitory power, but also directly by stimulating the intra-mural motor ganglia of the heart; and possibly, also, by raising the excitability of the accelerator nerve to the heart from the cervical sympathetic ganglia; and perhaps it may even stimulate the cardio motor centres in the medulla oblongata. Dr. Fraser considers it advisable to combine with the atropia a little morphia, say $\frac{1}{120}$ to $\frac{1}{60}$ of a grain of sulphate of atropia, *i. e.*, one to two minims of liquor atropiæ sulphatis (*B. P.*), and one-twelfth to one-eighth of a grain of acetate or hydrochlorate of morphia. These are injected about fifteen or twenty minutes before the administration of chloroform is begun; and by this means, (1) not only is the patient in a less nervous state when the inhalation is commenced, but (2) less chloroform is required, and (3) moreover, a very objectionable evil is got rid of, or, at all events, ameliorated, viz., the emesis which is apt to occur with chloroform.—*Medical and Surgical Reporter*, Dec. 18.

THE SIGNAL SERVICE AND PUBLIC HYGIENE.

The death of Gen. Meyer has brought the Signal Service prominently before the public. While the memory of the great services which Gen. Meyer rendered to meteorological science is still fresh, it is scarcely worth while to say that his death was a most fortunate one, both for him and the service. It was an open secret that, under his administration, all originality among the members of the service was most rigorously suppressed. The employes were mere machines, who were called on to act only when it was impossible to secure a self-registering piece of apparatus. Whether this studied and punctilious repression of originalty was the fault of Gen. Meyer or of military science, it is not our purpose here to discuss. Certain it is that the Signal Service has already attained quite the degree of usefulness possible under its previous management. The opportune death of the distinguished chief of the service has opened up to it new possibilities of usefulness. Chief among these is the opportunity to establish a department of public hygiene in connection with the Signal Service. We will admit that it is important that storm signals should, by timely warnings, protect our shipping interests from disaster. We admit that it is important that the reader of the morning paper should glance at the "Indications," and thus be able to take his rubber over coat or linen duster down town with him. We admit that the projectors of picnics and promoters of political gatherings may receive much assurance or much discouragement from the predictions of the weather. We contend, however, that this realm of usefulness may be greatly extended. There is a large class of diseases which are produced directly or indirectly by climatic influences. Sudden changes from wet to dry, from hot to cold, from calm to storm, are likely to produce colds, bronchial and lung troubles, or to develop germs of disease which otherwise would have remained quiescent. It is easy to see how an intelligent and scientific study of the influences of these climatic changes would lead to the discovery of the laws of their action on the human organism. It is likewise easy to see that a study of these details in the office of the Signal Service would lead to the prevision of their occurrence and a prediction of their results. We take it that it is of far more importance to the masses of our citizens to be officially warned of the danger of taking cold or contracting pneumonitis, than of areas of low pressure and the display of cautionary signals. Let the medical profession unite in a demand for the creation of a bureau of sanitary science in connectian with the Signal Service, the special function of which shall be the study of meteorology in its relation to puclic health. Warned against impending dangers, the wintry nose will cease to be a burden, and the jarring kakophony of the funeral cough will cease to be heard in the land.—*Chicago Medical Review*, December 20.

ON THE VALUE OF PARTIAL INTOXICATION IN THE PREVENTION OF SHOCK DURING OPERATIONS.

A Clinical Lecture.

By STEPHEN SMITH, A. M., M. D.,

Surgeon to Bellevue and St. Vincent's Hospitals, New York.

Gentlemen:—This young lady is about to submit to an operation for the removal of dead bone from the region of the hip-joint, the result of long-continued disease at that articulation. I shall reserve to another occasion the discussion of some interesting questions bearing on the management of this and similar cases, and occupy the few moments allowed me in explaining what is to you the most prominent feature of her case, viz., unusual good humor and vivacity, as compared with young women brought into this room for serious operations.

As you notice, she is in an extremely happy frame of mind for one evidentally so sensitive and excitable. Her face is flushed, her eyes suffused, her skin warm and natural, her pulse full and slow, her breathing quiet and undisturbed. Although she has been in great dread of being brought into your presence, and of undergoing an operation, yet she talks and laughs like one whose nervous system was simply exhiliarated by the society of friends or the stimulus of an exciting but agreeable scene.

The explanation of her condition is this: she is partially intoxicated, or "half seas over," using a common but expressive phrase. We have purposely brought her into this state in order to prepare her for the operation. During the last five hours she has been suppiled with whiskey at regular intervals, until she has taken six ounces, when the desired effect was secured, viz., partial intoxication. She is perfectly rational when you talk to her, and knows her condition, but is disposed to regard everything you may say as ludicrous—that is, she is insensible to danger, and in the most hopeful state of mind and body, in good condition for the operation.

My justification for this treatment is based on no inconsiderable experience. It happens, not very unfrequently, as some of you have witnessed, that operations are interrupted by the sudden and unexpected collapse of the patient. The surgeon may have reached a point, perhaps, at which there is a slight hemorrhage, when the patient quickly passes from a state of proper narcosis to that of profound prostration. The face assumes a deathly pallor, large drops of sweat starts from the forehead, the skin becomes cold and clammy with perspiration, the breathing is irregular and scarcely perceptible, the pulse is feeble, rapid, and irregular, and every sign and symptom indicate immediate dissolution. The operator and attendants are alarmed, the operation is abandoned, and all hands and heads are turned to avert impending death. In the belief that too much ether has been given the anæsthetic is withdrawn,

the chest is violently compressed under the pretence of causing artificial respiration, brandy or ammonia is injected under the skin, and at length the patient usually recovers sufficiently to allow of the rapid completion of the operation. But occasionally death supervenes despite the most persistent efforts to prevent it. If the patient recover from the depression, convalescence is slow and tedious, and the operation wound heals tardily and with an unusual tendency to suppuration.

An attack of this kind is not narcosis from anæsthesia, but shock, and generally in its most aggravated form. It occurs especially in those of great nervous susceptibility, or who have already suffered severely from the shock of injury, or who are prostrated by the exhaustion consequent upon long-continued illness, suppuration, or other cause.

As a preventive measure against shock in these cases, during an operation, partial intoxication of the patient with whiskey, brandy, or rum, will be found safe and reliable, and far preferable to quinine, opium, etc. The patient who has been laboring under great excitement in anticipation of the operation gradually becomes quite indifferent, or even bold and daring; the pulse is full and slow; the respiration undisturbed; the ether is quietly inhaled; but little, comparatively, is required; the stage of excitement is brief, or is passed without a struggle. During the operation, however prolonged, the pulse varies but slightly, unless there is a considerable loss of blood, and even in that case it maintains sufficient force to allow the operation to proceed to its completion. After the operation the pulse maintains its vigor, there is slight if any reaction, and the temperature remains nearly normal for the first twenty-four hours.

This practice is based upon the experience of surgeons anterior to the period of the use of anæsthetics. With them it was a well recognized fact that persons partially intoxicated at the time of the accident which necessitated the amputation, not only bore the operation with slight evidence of pain or shock, but made the best recovery. In a case of this kind I was impressed with the behavior of the patient. A man partially intoxicated entered the hospital with a crushed foot, which necessitated the amputation of the leg. He was talkative and quite indifferent both to the accident and to the proposed operation. Though the injury had occurred two hours before admission, there were but slight evidences of shock. His pulse was full and little excited, the skin was warm, the respiration undisturbed. I took advantage of his condition to amputate immediately. It was noticeable that he required but very little ether, that his pulse and respiration did not vary; in a word, that there were no evidences of shock. For twenty-four hours after the operation his pulse remained undisturbed, his skin warm and natural. He recovered within a period less than that usually occupied by similar operations.

The first case in which I purposely induced partial intoxication to prevent shock occurred many years ago. The patient was a young woman of naturally great nervous susceptibility, who was reduced to a very feeble condition by long-continued suppuration from caries of the tarsus. Amputation was advised, and although she was extremely anxious to have the operation performed, yet when the effort was made her excitement was so great that it was deemed dangerous to proceed. Twice she was placed upon the table, and the anæsthetic, at one time chloroform, and ether at the other, was administered; but her pulse became so rapid and feeble, her respiration so embarrassed, her lips becoming purple, that the operation was abandoned. Finally, as a last resort, it was determined to give stimulants several hours before the operation, and until she was decidedly intoxicated. The result was most happy. When she had taken eight ounces she was in the condition of this patient, quite indifferent to the operation, her pulse was full (at 96), and her respiration tranquil. But a very small amount of ether was required, the amputation was performed, the limb was dressed and she was placed in bed. There was no variation in the pulse or breathing during the operation, nor for twenty-four hours after. She did not discover that the amputation had been performed for sixteen hours, and, on learning the fact, was overjoyed. She made a rapid recovery.

There is another class of cases that is very favorably affected by stimulants taken during several hours preceding an operation, to the extent of partial intoxication. They are persons suffering from an enfeebled condition of the heart, and are noticeably overloaded with fat. They are very liable to succumb to even a very slight shock of the operation, when combined with the effects of the anæsthetics. The face rapidly becomes dusky, the lips purple, the respiration embarrassed, and the fulse feeble and irregular. Efforts at resuscitation sometimes prove unavailing, and the patient dies upon the table. As a preventive measure we usually give an ounce or two of whiskey just preceding the operation, and doubtless it often does prevent disaster, by arousing the heart and invigorating the circulatory organs. But such results are far more likely to be obtained if the stimulus is steadily given, in quantities suited to the condition and habits of the patient, for several hours preceding the operation. Reverting again to our patient, I must state that she is eminently a proper subject for this preparatory treatment. She entered the hospital a fortnight since suffering from suppuration throughout the thigh, due to extensive and long-existing caries at the hip joint. She was cadaverous in appearance, had irregular chills followed by profuse perspiration, a rapid, feeble pulse, and no appetite. Under an active tonic treatment her general condition has improved, but she

is not in a state to bear safely the slightest depression from shock. The effect of the stimulant has been to give more strength and steadiness to her pulse, a warmer skin, and more cheerfulness than at any time since her admission. I do not doubt that she will bear the operation well, and that there will be no shock, unless there should be a sudden loss of a very large amount of blood. The plan which I pursue is to commence the intoxicant five or six hours before the operation, and give one, two, or three ounces every hour, according to the habits and condition of the patient. This patient required six ounces of whiskey to bring her into her present state, the first ounce having been taken six hours ago. A few days since, an old drinker required sixteen ounces to induce the condition of this young woman. I have always used whiskey, and have occasionally given it in the form of milk-punch.

[It should be stated that during the operation the patient required but little ether; the pulse continued at 96, full and soft; the respiration was undisturbed. After the operation the pulse and respiration continued unaffected; there were no evidences of shock; no fever supervened; suppuration rapidly subsided; her general condition improved surprisingly, and in two weeks she resumed her hip-splint.]—*New York Medical Record*, Dec. 25.

THE ASYLUMS OF EUROPE.*

By GEORGE M. BEARD, A. M., M. D., New York.

While visiting Europe during the past summer I had occasion to study the asylums and the asylum systems of Great Britain, France, and Germany.

My method of investigation was to visit certian representative institutions, especially those that are supposed to be most advanced in their ideas of the treatment of the insane, but not to confine myself to those exclusively; and to converse with physicians and superintendents who had made themselves acquainted with the methods of managing asylums in their respective countries.

In studying these institutions I did not usually avail myself of any letters of introduction, nor did I give any preliminary announcement of my coming, nor was the special object of my visit stated until the visit was completed.

Offers of introduction from men of the highest influence in this department met me, but I had no occasion to accept them, I wished to see the asylums as they were in their actual and average daily life; in undress rather than in dress parade.

In some cases I saw the chiefs of the institutions, in others assistants or subordinates, in others still only the chief attendants.

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* Read before the meeting of the National Association for the Protection of the Insane, at Fifth Avenue Hotel, New York, November 11, 1880.

In England and Scotland all classes of the insane are under governmental supervision, and they are visited regularly by the officials, without any warning, whether confined in public or in private asylums. I inspected, therefore, the places that represented all these different modes of caring for the insane,—public institutions, those partly public and partly private, and those entirely private. I also spent two days at the home of Wickham Barnes, Esq., who resides near London, and who for many years has had in his house an insane patient who is regularly called upon by the commissioners in lunacy. Places like Gheel and Hanwell, and the West Riding asylums have been so often described that it did not seem necessary to go to them.

Among the institutions I visited were Saughton Hall Asylum, near Edinburg, under the charge of J. Batty Tuke, M. D.; the Royal Edinburg Asylum, under the charge of T. S. Clouston, M. D.; Faulborn Asylum, near Cambridge, under charge of Dr. G. M. Bacon; St. Ann's Asylum, Paris; Asylum for the Insane at Munich, under charge of Dr. Gudden; the Asylums at Vienna and Prague; and, lastly, the institution that is now exciting so much attention in Germany, at Alt Scherbitz, near Leipsic. I visited ten places where the insane are cared for.

Everywhere I was treated with all the kindness and courtesy that I could ask; not only was I shown through the institutions thoroughly, but my cross-examinations in order to get at the modes of treatment, methods of restraint, and general management of the institutions, were always pleasantly responded to on the part of those with whom I was brought into relation.

Assistance of the most valuable character I derived from conversations with Dr. Crichton Browne, formerly of West Riding Asylum, and now of the Chancellor's Visitors in Lunacy, who is therefore situated so as to know, as well as any one possibly can, the present condition and the prospects of the asylum system of England. By his suggestion I obtained a copy of the lunacy laws prepared by Danby P. Fry, Esq., and containing all the statutes relating to Private Lunatics, Pauper Lunatics, Criminal Lunatics, Commissions of Lunacy, Public and Private Asylums, and the Commissioners of Lunacy.

From this volume and my conversations with Dr. Browne, I obtained points which were more or less new to me, and which have aided me in reaching the conclusions I am here presenting. These conclusions, stated as briefly as possible, are as follows:—

First. *In the methods of supervision and in the general care of insane in public and private asylums Great Britain has been easily first of all nations.* Next to Great Britain comes Germany, which, however, is so fast improving that she soon may be on an equality with Great Britain; of the three British Isles, Scotland on the whole takes the lead of England and Ireland; and it may be positively affirmed that on the average the insane in

Scotch asylums are better treated than in any other country. Next to Germany comes France in order of merit.

This relative order of excellence is derived, I may say, not only from my own personal observation, but from extensive inquiries from men best fitted of all to know the true facts on this subject in their respective countries. (For some of these facts I am under especial obligations to Dr. Westphal, of Berlin, who takes much interest in the subject of the treatment of the insane, and by whose suggestions and invitation I visited the institution at Alt Scherbitz. Professor Ball, of Paris, also gave me information of value in reference to the French system and institutions. Dr. Arnold Pick, of Prague, a student of Westphal, interested himself very much in my inquiries. Conversations of this kind with different individuals in different countries, in asylums and out of asylums, I found of quite as much assistance as visiting institutions; I depended, however, neither upon the one method of gaining information nor upon the other, but as well as I could made use of both.

I may say also that in previous visits to Europe I had seen many of the best known alienists, and year before last had corresponded with them in reference to some of the special topics of which I am here to report.

Secondly. *Some method of governmental supervision of the insane appears to be universal, both in Grevt Britain and on the Continent.* Of the four great countries the United States appears to be alone in compelling the insane to depend exclusively upon their attendants and superintendents and superintendents and local trustees. The method of central supervision in Great Britain is somewhat complex, but it secures its object,—the guardianship of the insane.

The English commissioners must not only regularly visit the institutions, public and private, but they must visit each insane person who is kept in care for pay in any private house, and these visits must be made without any warning, and they must see the patient when they come, and they must inquire into and report upon the details of his life and treatment. In the case of wealthy patients—so-called chancery lunatics—that is, those who have property, inquiries of the most minute character are made: the commissioners are to find out whether the patients have all the cigars they want, all the means of amusement and recreation they need; whether anything within their means, however trifling, is left undone that would be for their comfort. For all classes of patients, poor and rich, in asylums the commissioners are guardian, and for everything that has a bearing on their welfare. They are consulted in regard to the plans and sanitary arrangements of buildings; they examine the records and registers of asylums, take care of letters addressed to them by patients, and, so far as possible, see to it that no persons are improperly admitted or retained.

The system of governmental supervision of Scotland differs

somewhat from that in England, and would appear, on the side of simplicity, at least, to have some advantage over that of England, but in principle it is similar.

Ireland also has a system which in its details is different from that of Scotland or England; but all these countries have a belief in central supervision; neither superintendents of asylums nor any other who have to do with the insane would think of doing away with this system of doing away with the asylums.

Thirdly. *In the best asylums of Europe mechanical restraint is reduced to a very small percentage, and instead of restraint labor is employed as a therapeutic agent.* These two facts, absence of restraint and presence of labor, impress one at once on visiting institutions like those, for example, near Edinburgh, or at Alt Sherbitz, near Leipsic. In England and Scotland I found no patient in restraint, and scarcely any excitment in the wards or grounds.

Padded rooms, and in some cases camisoles, are found in European asylums; but padded rooms are often, if not usually, empty, and the camisoles I did not see in use in any of the English asylums, and but very few in France or Germany.

In one of the German asylums the assistant who took me around pointed out one or two patients with their arms confined, and said, "This is not my idea; if I could have my way I would not use these."

The extent to which labor is employed seems incredible, and cross-examinations were constantly needs in order to convince me that not only washing, cooking, cleaning, and the immense farm work on the grounds, but also various trades, were carried on by the inmates, the patients of the asylums. Again and again I asked how they succeeded in making the lunatics work. The average reply was that, in general, there was no serious difficulty; that with proper management they could be trained to work and kept at work, and would do as much as, and, in some cases very much more than, persons in health.

Out of three hundred and forty-seven private and pauper male patients in the West House of the Royal Edinburgh Asylum, two hundred and fifty-four were profitably employed: one hundred and eighty-four in outdoor work, thirty-eight as tradesmen, and thirty-two as assisting attendants. The difficulty that Dr. Shaw, of the Flatbush Asylum, encountered, that is, the objection of friends of the patient to having their insane friends and relatives compelled to work, is not met with in Europe; so far as I could learn no such prejudice has to be overcome. Of five hundred and forty-one pauper patients in the Royal Edinburgh Asylum, of both sexes, only eighteen men and twenty-eight women were prevented by their mental and moral condition from being employed.

The utalization of labor is carried out in detail not only in England, but in France and Germany; and, as it would seem to me, more thoroughly and successfully in England than in the

other countries. At Alt Scherbitz there is a farm, on which the inmates work, and on that and in the shops and in the cooking and washing rooms are carried on almost all forms of labor,—as much as one would see in a good-sized village.

Whatever can be said, or has been said, or will be said to the contrary, the general principle of reducing restraint, or employing it merely in a very small percentage of cases, is not only universal in the best asylums of England, but is growing into favor everywhere in Europe. Among the most thoughtful, scholarly, and advanced men, especially the younger men, both in England and on the Continent, it is no longer a question, but an established principle beyond discussion, the only points raised being those which relate to the degree of restraint, and the best methods to be substituted for it. In these particulars there is not and need not be entire agreement any more than there is or need be entire agreement among physicians in regard to any hygienic or therapeutic measure.

Among the best alienists of Europe those who have done and are now doing the most to advance our ideas relating to insanity, theoretically and practically, in and out of asylums, the belief that restraint should be reduced to a minimum is as universal as the belief in the preventive power of vaccination. According to Westphal, non-restraint is the rule in the asylums of Hamburg, Göttingen, Charité (Berlin), Halle, Marburg, Heidelberg, Eberswalde, Keppenheim, Werneck, Munich, and Alt Scherbitz, and in all the asylums of Switzerland.*

Fourthly, *In the best asylums in Europe the insane are treated much like children.* This principle has not, I believe, been formulated in so many words; but, nevertheless, it is acted upon rationally and instinctively.

All families allow their children liberty, but it is a watched and guarded liberty; we do not chain them, nor shut them up in closets, but suffer them to come and go as they please, and as we please, according to their age, all the time keeping a guardianship over them to see that they do not wander too far away, and do not harm themselves or others. The insane are children, diseases of the brain practically depriving them of the advantages that come from education and maturity, taking away their manhood, and carrying them back to childhood; it is therefore wise to treat them like children. They are not, as a rule, to be chained, or cribbed, or bound, or camisolde, or locked in dark closets, or locked up at all, necessarily, but like children, allowed to come and go as they please, and as we please; all the time watched and guarded, lest they wander away or run away, or do injury to themselves or to society.

Now and then a child must be deprived of this average liberty; now and then a lunatic must be deprived for a time—a few

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* Alienist and Neurologist, October, 1880.

hours or days, or longer,—of this average liberty; but for the great majority there should be, always, the freedom of childhood.

When I visited Saughton Hall institution I asked the gentleman who showed me through the buildings what kept the patients from escaping. "Why," said I, "should they not all be in Edinburg in half an hour?" He replied that the patients were watched more carefully than was apparent, and that the number of escapes was comparatively small. The attendants watched them without appearing to do so; just as we look after our children, without keeping them constantly under our eyes, when we know where they are, and would at once miss them if they should wander, even though they may not know or suspect that we are looking out for them.

The experiment of carrying on a lunatic asylum with unlocked doors, dispensing almost entirely with bolts and bars, is one of the most interesting and important of all the scientific advances that have been made in the treatment of the insane, and both alienists and psychologists would do well to study it. Dr. J. Batty Tuke, of the Saughton Hall institution, near Edinburg, in his report for 1879, says that when he was medical superintendent of the Fife and Kinross District Lunatic Asylum he ordered all the doors of the asylum, inside and outside, to be left unlocked,—only three wards being excepted, in which thirty out of two hundred and sixty patients resided. As a result of this experiment, there were no accidents and few or no attempted escapes. There was greater tranquility among the patients, and some who had before tried to run away no longer manifested any desire to do so. At first there was a great anxiety on the part of the officers and attendants, and this anxiety caused them to be more watchful and careful, and, for a time, there was some increase in the number of escapes; but after a few weeks this anxiety on the part of the officers and increase in the number of attendants ceased to be necessary, and the doors were not specially watched. This system was carried out in the same asylum by Dr. Tuke's successors, Drs. John Fraser and Joseph Brown.

Dr. Arthur Mitchell, commissioner of lunacy, of Scotland, in his report for 1879, says of this asylum that "it was entered and traversed almost from end to end without summoning a servant or requiring any door to be unlocked; only three wards—two female and one male—were locked." In two other Scotish asylums for the insane this plan has been adopted. In the Barony Asylum, at Lenzie, near Glasgow, under charge of Dr. James Rutherford, every door of the institution is unlocked, although it contains four hundred and fifty patients.

When Dr. Tuke took care of Saughton Hall institution, he carried out the same system of treatment, and in his report for 1879 he says that there have been no escapes and no attempts at escape; that patients who used to stand at the doors, on the

watch for a chance to get out, no longer do so; that many whose intellects were but slightly disturbed, and who have recovered, have expressed their gratitude to him for the relief experienced by the change from locked to unlocked doors; that this system has had an educational influence on all the inmates, so that it is now possible to give greater liberty to all than before. Certain select cases are allowed to go on parole.

All this, surely, is a new, interesting, and almost incredible advance on the reforms of Pinel, Hill, and Connolly; it is a higher stage in the evolution of the management of the insane. Pinel broke the chains of the insane, took off the manacles. To-day, we go farther; unlock the doors.

I visited this Saughton Hall institution, and found it difficult to believe the gentleman who showed me over the place, when he said that it was an insane asylum. In external appearance, in internal arrangements, in the attendants, in the manner of the inmates, in the furniture and arrangement of the rooms, there was nothing that suggested an asylum or a hospital; it was more like a gentleman's delightful country residence, with open windows and doors, and ample and attractive grounds, beautified in the English style with varieties of shrubbery and flowers. I said to myself, This is the poetry of insanity, one might be willing to become insane, if he could be treated here.

In this asylum, and in others of similar character in Great Britain, it is the custom to have the patients, during in the summer season, reside in villas by the sea-side, where they remain for a month or two, during July and August, and with most satisfactory results. The sea-side home of Saughton Hall institution is seventeen miles from Edinburgh. Thus it will be seen that the insane in England, who have the means to do so, live like gentlemen and ladies, with their summer and their winter residences, with proper liberty, and supplied not only with the necessities, but also with the luxuries of life.

Fifthly. *The best asylums of Europe are not enormous or imposing buildings, but a series or collection of small or moderate-sized unimposing cottages or houses.* In Europe, as in America, alienists began by placing the insane in gigantic palaces, and there, as here, they are finding out that with the increase of insanity, which could not have been anticipated either here or there, there must also be a change in the method of the construction and arrangement of asylums, although many large buildings remain.

The institution at Alt Sherbitz has six or eight cottages, a small distance from each other, each cottage being about the size of a moderate country home,—all plain brick buildings, pleasing in appearance outside, and comfortable in reality inside. The Royal Edinburgh Asylum is composed of five houses, separated by a considerable distance; between the so-called "East House" and "Craig House" there is a

space of almost a mile. It is believed and asserted that this splitting up of large buildings into a number of small ones, and this scattering the insane over a wider area than has been the custom formerly, is an immense practical advantage for all classes of lunatics. It allows them variety of employment; it allows seclusion for those who wish to be secluded; it gives change of scene and environment, so needful for sane and insane.

Sixthly. *The methods of treating the insane in and out of asylums that have been most satisfactory in Europe can be and will be introduced in this country, in spite of and in the face of certain practical difficulties.*

The chief of these difficulties is the nature of our political system, the motto of all political parties being, as you know, The spoils belong to the spoiler. Whatever can be obtained from the State is so much gain to the individual. Offices are the wages that we pay those who obtain offices for us.

Lunacy reform is, therefore, on one side, a branch of civil-service reform, and must rise and fall with it.

One of the Chancellor's Visitors in Lunacy told me that he had a salary of seventy-five hundred dollars, that his position was a life one, that he could be removed only by the joint action of both houses of Parliament and the consent of Her Majesty. But as we have, on the whole, good men appointed on our health boards, with exceptions now and then, it is fair and right and rational to hope that we shall have, on the whole, good men appointed on the central supervising commissions when we get the legislation.

This practical difficulty, therefore, grave as it may be, though it should not be forgotten, and must always be considered, is yet not to be anxiously or discouragingly feared. The first need of lunacy reform in this country is the creation of a mixed board of government commissioners in each State.

Yet another practical difficulty, not always referred to in these discussions, is that of getting as good officers and attendants at small salaries as can be obtained in Europe for the same salaries. In all departments of activity in Europe we find men of much ability, native or acquired, filling humble or badly rewarded stations, who, in this land, might be making themselves wealthy and illustrious. This fact, the result of limited geographical area and excess of competition, is an advantage to those who seek for attendants or companions for the insane, or for superintendents of asylums. A moderate amount of money will purchase a far higher order of talent, and insure greater devotion, there than here. In the Saughton Hall institution they adopt the plan of having educated, cultured ladies, in reduced circumstances, as companions for the wealthy insane. The duty of these companions is to accompany the patients in their drives and walks, be with them constantly in

the drawing-rooms, to supervise, in a degree, the nurses, and, in some instances to sleep with those under their charge; and from this plan results of the most satisfactory character have been gained. In this country it would be far more difficult to find cultivated ladies who would be willing to take such positions.

In the treatment of the insane outside of asylums, by general practitioners and students of the nervous system, there has probably been as much advance in this country as abroad; and especially in the treatment of various morbid states of the nervous system that often lead to insanity there has been nowhere such satisfactory progress as here. This is the philosophical method of combating insanity: treating the insane before they are insane; arresting candidates for lunacy before they have stepped on the threshold of the asylums.

In regard to private asylums, concerning which Dr. Bucknill has lately written with so much vigor, these two facts must be admitted: that the system is liable to abuse or to suspicion of abuse, even under the central supervisory commissions, but that they would appear to be in a degree almost, if not quite, a necessity, with which we cannot entirely dispense.

In this respect, as in all respects, we are to study Europe, not to imitate it: what is good we are to keep, what is evil we are to reject; the chances for improvement by invention and discovery we are to resolutely occupy. To aid all these processes of scientific advance in the study of insanity, and in the management of the insane, this society has been organized, and will be maintained.—*Bost. Med. and Surg. Journal*, Dec. 23.

BERIBERI.

Dr. E. Hebersmith, in a note to Surgeon-General Hamilton, concerning the cases of beriberi taken into the U. S. Marine Hospital at San Francisco, from the Brazilian man-of-war, says: "It is a disease of faulty hygiene, modified as to its causation by local, climatic, or possible hereditary influences, producing its effects primarily upon the blood corpuscles, causing disintegration and death of the red blood-corpuscles, and increase of the white blood-corpuscles. The effects upon the heart and circulation are secondary, as are the effusions; all follow as a natural sequence of the changes in the blood, and the treatment is blood-building. Certainly the success in the treatment of these patients justifies the correctness of the views expressed above. Of the sixteen cases, two died the day after admission, and one on the fourth day. Nine have recovered, and four remain at the hospital convalescent, but awaiting transportation. Some of those discharged run into cold weather on their way east, and I am fearful of the result. As this is a disease prone to relapse, some of the brethren east may have opportunity to study it."—*Med. Record*, Dec. 25.

RECENT AMERICAN ANATOMY ACTS.

By EDWARD MUSSEY HARTWELL, M. A., Fellow of the Johns Hopkins University.

The Massachusetts anatomy act of 1831 was productive of results in two directions: it lightened the burdens of the teachers of anatomy in that State, and it led to the enactment of similar laws in other States. Connecticut passed a liberal act, modeled on that of Massachusetts, June 5, 1833, but repealed the same June 5, 1834. New Hampshire legalized anatomy in 1834, but rescinded its action in 1842. Michigan passed "an act to facilitate the study of anatomy," March 9, 1844, but repealed it April 7, 1851. New York is entitled to the place of honor next to Massachusetts on the list of States which have consistently endeavored to promote anatomical science. The New York law of April 1, 1854, has never been repealed; on the contrary, it has been improved, notably by the amendatory act of June 3, 1879.

Referring to the Massachusetts law of 1831, as amended in 1845, Dr. John C. Warren says: "The superintendent of the House of Industry opposed great difficulties to the execution of this law; but he dying in 1847 an ample supply was obtained for the medical school afterwards, particularly in consequence of the influx of Irish paupers and the great mortality among them." Concerning the working of the same law Dr. George Hayward, writing in 1855, says: "The supply has not been, perhaps, as great as could be wished, but with the increase of population and pauperism this objection will pass away." We doubt if in the judgment of the anatomists of the Harvard Medical School "this objection" has "passed away." We incline to the belief that "with the increase of population and pauperism" there has been at least an equal increase of demagogues, and that no class of men in Massachusetts have a more realizing sense than have its anatomists of the relation existing between eternal vigilance and the price of liberty.

The city government of Boston, November 3, 1869, ordered "that permits be issued by the city clerk, until otherwise ordered, to the surgeons of the Harvard Medical School to take the dead bodies of such persons dying at Deer Island, or the House of Correction, the County Jail, or City Hospital, as may be required to be buried at the public expense." The statutory restrictions concerning the delivery of unclaimed bodies are embodied in the remainder of the ordinance. The anatomists of Baltimore, Washington, and New Orleans might fairly consider this Boston ordinance a liberal one, for they are still obliged to dissect without a legal warrant, or not at all. On the other hand, in Germany or France, where for years the dissecting-rooms have been furnished with the unclaimed dead by the police, this ordinance would unquestionably be considered imperfect and illiberal.

It is unfortunate that American anatomists are forced to dance attendance upon public functionaries for "permits," as they are thereby put in the false position of seeking as a personal favor what ought to be furnished them for the furtherance of the public welfare. Possibly the time is not yet ripe for the Massachusetts anatomists to demand that the unclaimed dead of Springfield, Fall River, Worcester, Lowell, in short the entire State, as well as of Boston, should be delivered to them at their dissecting-rooms; but such a consummation is none the less devoutly to be wished for. Massachusetts led off in legalizing the dissection of bodies required to be buried at the public expense. Would that she might inaugurate an administrative reform which should prevent the present wasteful decomposition of valuable material at the bottom of graves, and preclude the necessity which requires one who is bent on thoroughly learning practical anatomy in all its branches to seek the anatomical institutes of Europe!

The most elaborate, the most liberal, and also the most stringent of American anatomy acts have been passed within the last five years. Those of Michigan, Indiana, Ohio, New York and Iowa are especially noteworthy.

The Michigan act of 1844, which, as we have noticed, was repealed in 1851, required the officers of the State prison to surrender the bodies of all unfriended convicts dying in their prison to any agent of the medical society of the State, who should present an order for the same signed by the president of the society. Similarly, the unclaimed bodies of convicts dying in a county jail, under sentence of six months' imprisonment or more, were deliverable to the agents of the medical society of the county in which the jail was situated. In 1867, a new act was passed, which has since been twice amended,—once in 1871, and again in 1875, April 27th.

As this act contains certain provisions not found in any other which has come to our notice, we give it entire. It is found at page 164 of the Laws of Michigan of 1875.

The People of the State of Michigan enact, That any member of either of the following boards of officers, to-wit: the Board of Health of any city, village, or township in the State, the Mayor or Common Council of any city, and any officer or board having direction, management, charge or control in whole or in part of any prison, house of correction, or jail in the State, shall deliver the bodies of such persons as may be required to be buried at the public expense, when so requested by letter or otherwise, to any member of the medical faculty of the University of Michigan or Detroit Medical College, when there shall be deposited with such board or officer sufficient money to defray the expense and trouble of packing and preparing the same for shipment, which shall not exceed the sum of fifteen dollars for such subject. They shall deliver within forty-eight hours after the death of such person,

to the express company or freight company at the nearest railroad station, properly placed in a plain coffiin as for burial, and inclosed in a strong box plainly directed to the person and place as directed by the consignee making such deposit, to be shipped to such consignee, to be by him used for the advancement of anatomical science, preference being always given to the faculty of the medical department of the University of Michigan for their use in the instruction of medical students, and after they have made their orders and deposit of money as atoresaid; and such board or officers shall take the usual shipping receipt for such packages, and shall notify the consignee of such shipment by letter mailed on the day the packages are delivered to the express company or freight company at the railroad depot. In no case shall the faculty or the regents be entitled to require or receive from any medical student or students for any such body furnished therein any sum of money in excess of the actual cost of procuring the same. Any of the said officers who shall neglect to comply with any such request, after being tendered or receiving the money so required to be deposited, shall be subject to a penalty of one hundred dollars ($100) for each body that he neglects to ship as aforesaid, one-half of which shall go to the party making the demand and deposit as aforesaid.

Provided, That the university and each and every medical institution shall not receive into their possession such bodies as are procured in this State other than those provided for by the provisions of this act, and every individual or party violating this provision shall be deemed guilty of a misdemeanor.

SEC. 2. No such dead body shall be shipped as aforesaid, if within twenty-four hours after death, or before such body shall be shipped, any relatives or friends of the deceased who will bury the body at his own expense, or shall require to have the body buried; or if such diseased person was a stranger or traveler, the dead body shall in all cases be buried.

SEC. 3. No such dead body shall be sold or delivered to any person to be taken out of the State, nor shall any such body be shipped away to any person or place out of the State, or be used within the State for any purpose, except for the prosecution of anatomical science. Any person violating any of the provisions of this act shall be punished by a fine of not less than fifty nor more than one hundred dollars, or by imprisonment in the county jail not less than one or more than three months, or by both such fine and imprisonment, at the discretion of the court.

SEC. 4. Any practicing physician or surgeon of this State, or any medical student under the authority of such physician or surgeon, may have in his possession human dead bodies, or the parts thereof, lawfully obtained, for the purpose of anatomical inquiry or dissection.

Indiana had not legalized dissection when, in the spring of

1878, the body of the Hon. J. Scott Harrison, a son of the late William Henry Harrison, president of the United States, having been stolen from its grave near to the Ohio line, was found by the son of the deceased, the day after his burial, in a Cincinnati dissecting-room, whither he had gone in search of another body. The only penalty for grave robbery under the Indiana statutes was a fine not exceeding one thousand dollars, provided by the act of June 14, 1852. This case of resurrecting led to the improvement in 1879 of the laws of both Indiana and Ohio. Possibly the stringent amendment to the Iowa law, passed March 26, 1880, might be traced to the outrage of the Harrison tomb.

Chapter LXV. of the laws of the fifty-first session of the General Assembly of Indiana is "an act in relation to the use of human bodies for the purpose of dissection; to require a record thereof to be kept, and to punish the unlawful possession or dissection of such bodies and the violation of graves."

SEC. 7. *Be it enacted, etc.*, That every medical school, or college, or incorporated medical association in this State shall keep, in a suitable book to be provided for the purpose, a record of all human bodies, or any parts thereof, received by such school, or college, or incorporated medical association, or by any officer, professor, or student thereof, for the purpose of dissection; in which book shall be plainly entered, at the time of receiving such body, the name of the deceased person, if known, so received, and his or her residence, when in life; the true name, the residence of the person from whom said body is received, and the price paid therefor; which book shall be produced and exhibited, upon the demand of any officer who may, under proper process of law, be making inquest in the buildings or rooms of such school, or college, or incorporated medical association, for any dead body alleged to be unlawfully concealed therein, and upon the lawful demand of any court or officer thereof.

Section 2 makes it punishable by a fine of "not less than one hundred nor more than five hundred dollars, to which may be added imprisonment in the county jail for any period not less than one month nor more than one year." If the person having the custody of the record required by section 1 failed or refused to produce it, section 3 declares it a felony, punishable by imprisonment for not less than one nor more than five years, for any person to "receive, or have in possession, or dissect, or permit to be dissected, ...any such body of which the record required by section 1 shall not have been made." Making a false entry in the record is made a felony by section 4, punishable by not less than one nor more than three years' imprisonment in the state prison.

Imprisonment in the state prison for not less than two nor more than five years is the penalty provided by section 5 for the felon "who shall dissect, or have in his possession for the

purpose of dissection, any human body, or any part thereof, other than such as are or may be given by law for such uses." Section 6 makes those who "have the supervision of the dissecting-room and of the instruction given therein" responsible "for bodies received or found therein." Section 7 relates to illegal exhumation, which is made a felony, punishable by imprisonment in the state prison "for not less than three nor more than ten years." According to section 9, one who knowingly aids in concealing an unlawfully procured body is liable, as a felon, to imprisonment in the state prison for from one to three years. Section 10 declares that "any person who shall buy or receive, by gift or otherwise, any dead human body, or any part thereof, knowing the same to have been disinterred . . . in violation of this act, shall be deemed an accessory to such offense, and, on conviction thereof, be punished in like manner as is prescribed in the preceding section."

The above act was approved by the late Governor Williams on March 12, 1879, on which day "a bill to promote the science of medicine and surgery by providing methods whereby human subjects for anatomical and scientific dissection and experiment may be lawfully obtained, and prescribing penalties for violations thereof," was also presented to him for approval. Not being "returned by him with objections within three days thereafter," the bill became an act without his signature. Both these acts are to be sought in the session laws of 1879, where they are found as Chapter LXV. and LXVI. respectively.

The most important sections of Chapter LXVI. are as follows:—

Section 1. *Be it enacted, etc.*, That when the body of any person who shall die in any State, city, or county prison or jail, or county asylum or infirmary, or public hospital, within this State, shall remain unclaimed by any next of kin or relatives of such deceased person for twenty-four hours after death, and be liable to be buried at public expense, and there are no next of kin of such deceased person, or next of kin, if known, shall, upon notice, refuse to receive and bury the body of such deceased person, such body may be used as a subject for anatomical dissection and scientific examination, in aid of medical and surgical science, as hereinafter prescribed: *provided*, that when any person shall express a wish to be buried the dead body of such person shall not be delivered for dissection, but shall be properly buried. . . .

Sec. 3. It shall be the duty of every superintendent, officer, or person having in charge any institution or association named in the first section of this act to keep a book of record therein, wherein shall be entered, on the day of reception, the name, sex, and age of the person received as a prisoner or patient therein, his or her place of birth and of residence, the names of his or her parents, and their residence, if living, and the names and residence of the wife or husband, if any, and

brothers and sisters, if any, of such person, and the date and cause of death of such person; if he or she die in such institution; and the body of any person dying, as aforesaid, whose record, thus made, shall afford proof or probable reason to believe that there are next of kin of such person living within the United States, shall not be delivered to any medical college or incorporated medical association, as aforesaid, except upon the neglect or refusal of such next of kin, after due notice, to receive and bury, or pay for the burial of, such body, but shall be decently interred, subject to all lawful rights or claims thereto of such next of kin.

SEC. 4. The dead body of any convict, executed under the laws of this State for any capital offense, may be, by the sheriff delivered for dissection, or other scientific purposes in medicine or surgery, to the faculty or other proper authorities of any duly incorporated or organized medical college or association within this State in operation nearest the place of such execution, upon the proper written request of such faculty or college authorities: *provided*, that there be no next of kin, known to the sheriff, of such executed person claiming such body, in which case it shall be delivered to such claimant.

SEC. 5. In case of any vagrant found dead, or in case of any body killed while committing a felony, or if any prisoner is convicted of felony and justifiably killed in attemping to escape from prison or officers of the law having him or her in lawful custody, upon the body of which person an inquest may lawfully be held, and shall be held by the coroner or other officer thereto lawfully authorized, it shall be the duty of such inquest to inquire as to the existence and residence of any next of kin of such deceased person; and if it shall be theverdict of such inquest that the person so found dead or killed had no next of kin, the coroner or other officer holding such inquest may, at his discretion, and with the approval of the sheriff of the county wherein such inquest is held, upon the request in writing of the faculty or other authorities of any duly incorporated and organized medical college or medical association within this State, in operation nearest to the place of such inquest, deliver such dead body to such college for the scientific purposes thereof, taking a proper descriptive receipt therefor, which shall be filed with the clerk of the county.

SEC. 6. It shall not be lawful for any officer or agent of any incorporated medical college, nor for any other person, directly or indirectly, to tender or pay to any public officer, or superintendent, or other person named in or intended in the preceding sections of this act, nor for any such officer, superintendent, or person, directly or indirectly, to ask, or take, or receive any money or other gift, or valuable consideration, or reward for the delivery of any dead body as aforesaid; and any person violating the provisions of this section shall be deemed guilty of a misdemeanor, and, on conviction, be fined in a sum not

exceeding one thousand dollars, and be imprisoned in the county jail not exceeding six months.

SEC. 7. Any officer, superintendent, or person named or intended in the preceding sections of this act who shall deliver over, or any person who shall, knowingly, receive for dissection or scientific purposes, as aforesaid, any dead body, in violation of the provisions of this act, shall be deemed guilty of a felony, and, on conviction, be fined in a sum not exceeding five hundred dollars, and be imprisoned in the state prison not exceeding three years.

Ohio, as early as 1831, enacted penalties for grave robbery, but did not pass any "act to encourage the study of anatomy" till March 25, 1870, when an inadequate law with the above title was passed. House bill No. 216, Ohio legislature, 1878, embodied an attempt to repeal the act of 1870 in the following remarkable terms:—

"*Whereas*, by the laws of this State the bodies of criminals, executed for heinous offenses, unless said criminals are poor and friendless, are entitled to decent burial; *Whereas*, poverty is no crime, and the poor, honest, the friendless man, in life and in death, should before the law be the equal, at least, of the depraved criminal; and *Whereas* by the laws of this State, the bodies of deceased and unclaimed poor are authorized to be given over to certain colleges and schools for dissection; therefore,

"SEC. 1. *Be it enacted* etc., That an act entitled an 'An act to encourage the study of anatomy.' passed March 25, 1870, be and the same is hereby repealed.

SEC. 2. This act shall take effect and be in force from and after its passage."

The person who introduced the bill, meeting with unexpected opposition, finally withdrew it, saying that he had "only introduced it for fun." The Harrison horror satisfied the Ohio legislators that anatomy could not be regulated by jocose legislation; and an earnest attempt was made to protect alike the anatomists and the dead.

Section 3763, of the Revised Statutes of Ohio, passed June 20, 1879, reads as follows:—

"All superintendents of city hospitals, directors or superintendents of asylums for the insane, or other charitable institutions, founded and supported, in whole or in part, at public expense, the directers or wardens of the penitentiary, and the coroner in possession of bodies not claimed or identified, shall, before or after burial by such superintendents or directors, on the written application of the professor of anatomy in any medical college, or president of any county medical society, deliver to such professor or president, for the purpose of medical or surgical study or dissection, the body of any person who has died in either of said institutions from any disease not infectious, if such body has not been requested for interment by a person at

his expense; if the body of any deceased person so delivered be subsequently claimed, in writing, by any relative, or the legal representative of such deceased person, for private interment, it shall be given up to such claiment. After such bodies have been subjected to such surgical or medical examination or dissection, the remains thereof shall be interred in some suitable place, at the expense of such medical college or society. But in no case shall the body of any deceased person, specified in this section, be delivered as herein provided until after one or more of the relatives of such deceased person, if known, shall have been notified, in writing, by the officer having such body under his control, and in no case shall such body be delivered until after the expiration of twenty-four hours from death. The bodies of strangers or travelers who die in any of the institutions herein named shall not be so delivered for the purposes of dissection; and all bodies delivered, as herein provided, shall be used for medical and surgical study and dissection only, and within this State, and the possession of the body of any deceased person for the above purpose, and not authorized under this section, shall be unlawful, and the detention of any body claimed by relatives or friends for interment shall also be unlawful."

Section 7034, of the Revised Statutes of Ohio, 1880, provides as a penalty for engaging or assisting in an unlawful exhumation, a fine of not more than one thousand dollars, or imprisonment not more than six months, or both.

Section 7035 reads: "Whoever, being lawfully possessed of any corpse for the purpose of medical study, uses the same for any other purpose, or removes the same beyond the limits of this State, or in any manner traffics therewith, shall be imprisoned not more than one year."

The New York act of June 3, 1879 may be found printed in full on page 362 of this journal. The act of 1879 extends the provisions of the act of 1854, which applied only to cities having more than thirty thousand inhabitants, to "counties containing such cities." No other change is enacted.

From 1851 till 1880 it was provided in the chapter of the code of Iowa which relates to offenses against chastity and decency that every offender who should illegally disinter, or assist in disinterring or concealing any human body, should "be punished by imprisonment in the county jail not exceeding one year, or by fine not exceeding $1000, or by both fine and imprisonment." By act of March 26, 1880, every such offender is now liable to imprisonment "in the penitentiary not more than two years, or by fine not exceeding $2500, or by both fine and imprisonment." By the act of April 22, 1872, Iowa allowed, under the customary restrictions, any coroner or undertaker in any county or city in which the population exceeded one thousand inhabitants to deliver to any medical college or school, or any physician in the State, for the purpose of medi

cal or surgical study, the body of any deceased person, except where such body had been interred or dressed for interment.

Section 4019½ of the Iowa statutes, passed March 26, 1880, contains, so far as the writer has been able to learn, the latest American legislation regarding cadavera. It is as follows:—

"Any physician receiving the body or remains of a deceased person for the purpose of medical or surgical study, and any professor or person in charge of a medical college or school at which such body or remains are received for such purpose, shall in a suitable book make or cause to be made a legible record of the time when, the name and description of the person from whom, and the place where such body or remains were received, and whether or not such body or remains were received, and whether or not such body or remains when so received was inclosed in any box, cask, or other receptable, and if so inclosed shall record a description of such box, cask, or receptacle, sufficient to identify the same, together with the shipping marks or directions, if any, on same; and also a description of such body or remains, including the length, weight, and sex of same, the apparent age of the person at the time of death, color of the hair, or beard if any, and any and all marks or scars on such body by which same might be identified, and whether or not such body when so received was mutilated so as to prevent identification of same. And such physician, professor, or person shall keep the said record, and on demand exhibit same, as also any and all such bodies or remains of deceased persons then in his charge, for the inspection of any sheriff or his deputy: *provided* such record shall not be required one year or more after such body was received. Any physician or professor or teacher in a medical college or school who uses or allows or permits others under his or her control or charge to use the body or remains of a deceased person for the purpose of medical or surgical study without the record as aforesaid having been first made, or on demand being made by the sheriff or his deputy as aforesaid, shall refuse and fail to exhibit any such record or body in his charge or under his control to such officer for his inspection shall be guilty of a misdemeanor, and upon conviction be punished by imprisonment in the county jail not exceeding one year, or by fine not exceeding $1000, or by both such fine and imprisonment."

The business of graduating medical students who are required to show evidences of at least a cursory acquaintance with *cadavera dissecta* has assumed such proportions as an industry in States without anatomy acts that further legislation for the protection of anatomists is inevitable. As we write, Maryland, which has neither a law forbidding grave robbery nor one allowing dissection, is agitated over the very recent violation of graves in a fashionable Baltimore cemetery. A newspaper even goes so far as to suggest that the Legislature "frame a law of sufficient penetentiary penalty to prevent "body snatching."—*Bost. Med. and Surg. Journal*, December 23.

HYDROPHOBIA FIVE YEARS AFTER INOCULATION.

At a late meeting of the Académie de Médecine, M. Colin related the case of a patient who had just died under his care of hydrophobia of two days' duration, the result of a dog bite received in Algeria on the 2nd November, 1874. One of the man's comrades, who had been bitten at the same time by the same dog, died of hydrophobia in eight days after the receipt of the bite. That virus may be deposited locally, and remain innocuous for a variable period until accidentally absorbed into the blood, has been experimentally proven by M. Pasteur in his investigations into the "cholera of fowls."—*Canadian Journal of Medical Science*, January.

LIGHT AND NUTRITION.

The influence of light upon the nutrition of the animal body is a subject which appears to have received more attention from the practical physician than from the physiologist. There are few persons who do not believe in the hygienic value of abundant light as well as of fresh air; but it has been difficult to point to other than pathological or negative evidence in favor of this opinion. We have now at our command definite physiological facts respecting the influence of light upon the excretion of carbonic acid in the lower animals. These are the results of investigations carried out by Moleschott and Fubini, of which we find an abstract in the *London Medical Times and Gazette*. By carefully arranged experiments these observers were able to estimate, not only the comparative, but the absolute or quantitative, effect of light upon amphibia, birds, and mammals, and to exclude from the result the effects of temperature and movement. The result was in all classes of animals so far the same—the admission of light to an animal, which had been previously kept in the dark, raising the amount of carbonic acid excreted from 20 to 40 per cent., and from 11 to 27 per cent. even when the animal had been previously blinded. It thus appears, as we should have expected, that light affects nutrition not only through the retina, but also through the skin. What is more remarkable is that the nutrition of the muscular system, after removal of the skin, central nervous system, and eyes, was found to be 50 per cent. more active in light than in darkness; while the brain and spinal cord similarly tested showed similar, though less marked, nutritive activity under the influence of light. Further experiments showed that blue-violet light exercises precisely the same influence on nutrition as white light; while red light affects frogs similarly to darkness; although it stimulates nutrition to a moderate degree in birds and mammals. The individual tissues proved to be affected by colored light in much the same way as the entire body.—*Boston Journal of Chemistry*, January.

Editorial Department.

The following report has not only a paramount local importance but is of interest to the whole country:

PROCEEDINGS OF SPECIAL MEETING OF NEW ORLEANS MEDICAL AND SURGICAL ASSOCIATION, JANUARY 22d, 1881.

Dr. Holliday, before reading the report of the committee, spoke as follows: Previous to reading the report of the special committee, I would respectfully say, that the object of the appointment of this committee was distinctly foreshadowed in the animus displayed at the recent meeting of the American Public Health Association, and also the meeting of the Sanitary Council of the Mississippi Valley, showing clearly and decisively the opinion universally prevailing against the system of quarantine adopted in New Orleans, and it remains for us, gentlemen to alter it, or to so amend it as to pass such a set of quarantine laws as shall command the confidence of the whole of the Mississippi Valley.

With that view, this Association appointed a special committee to report to-night some provision for quarantine laws; in fact, such a report as would enable us to establish a set of quarantine laws that would be all that can be desired by the whole Government, especially by all portions of our country specially interested in the introduction or importation of all contagious diseases. It is with this view, gentlemen, that this report wasmoved, which I now proceed to read:—

Report of Special Committee of the New Orleans Medical and Surgical Association on the Question of Quarantine.

Mr. President—Your committee appointed to present suggestions with regard to quarantine, now so stringently demanded by the United States at large, beg leave to submit the following to this body for discussion and adoption:

Feeling confident, as we all must, that the future commer-

Report of Committee on Quarantine, with Discussions thereon. Stenographically reported by C. Henry Salomon, Stenographer, 515 Baronne St.

cial prosperity of our city would be certainly jeopardized by any further delay in the adoption of some measure of quarantine which will *command* the confidence of the whole Mississippi Valley, it behooves us to ignore all previously expressed opinions, and demonstrate that we are ready to do all in our power to protect the large section of the country dependent upon our vigilance as guardians against the introduction of infectious diseases.

While steadily pursuing our work of general sanitation in the city of New Orleans, and preventing, as far as we are able to, the importation of yellow fever, it is our opinion that hereafter the responsibility of keeping infectious and contagious diseases entirely out of the Mississippi River, should devolve upon the National Government, as being the only power capable of exercising such supervision as would be satisfactory to all interested communities.

By the adoption of the above course we will be relieved from the unjust aspersions, so frequently cast upon us of late, of wilful concealment and misrepresentation; and all reason for future panics in the towns of the interior and all occasion for the senseless adoption of "shotgun" quarantines (more frequently suggested for selfish purposes than the true protection of public health) will be avoided. In consideration of the foregoing your committee suggest, that:

SECTION 1. Quarantine shall consist of the detention for purposes of disinfection, fumigation and purification, of all vessels from ports in which yellow fever usually prevails, or from ports where other infections or contagious diseases are reported to exist.

SEC. 2. All vessels from ports in which yellow fever is prevailing, or from ports where other infectious or contagious diseases are reported to exist, shall be detained at quarantine station for purposes specified in section 1, for such length of time as the proper authorities may determine.

SEC. 3. In case yellow fever, cholera, scarlet fever, diphtheria, plague, small-pox or typhus fever prevails in epidemic form at the port from which the vessel sailed, or at any port at

which she has touched during the voyage, the detention at quarantine shall not be less than sufficient to complete the full period of days from the date of exposure to such infection.

SEC 4. In case the condition is satisfactory and neither yellow fever, small pox, cholera, plague, nor typhus fever exists at the port from which she sailed, or at any intermediate ports, at which she may have touched, or on any vessel with which she has come in contact during the voyage, the quarantine officers, after thorough inspection, cleaning, fumigation and disinfection, may give free pratique, and the vessels may proceed to her destination.

The above recommendations are taken from "Acts of the Louisiana Legislature, on quarantine."

SEC. 5. We would recommend the adoption of the following report by Drs. Loeber, Davidson and Beard, made to the State Board of Health of Louisiana, April 29th, 1880, as expressing the views of the meeting on the important questions involved.

OFFICE BOARD OF HEALTH, STATE OF LOUISIANA,
New Orleans, April 29, 1880.

Dr. Jos. Jones, President Board Health, State of Louisiana:

Sir—Your committee to whom were referred certain interrogatories from the National Board of Health, designed to elicit suggestions for addition to, or alterations in their rules and regulations, beg leave to report as follows:

1st. Our attention is specifically directed to the desire of the board to make a distinction between the terms *suspected*, infected, and dangerously infected, as applied to ports and places, or to vessels, with the request that suggestions be offered as to the sense in which these words should be used. In reply, we would remark that in our opinion the term *suspected* is objectionable for the reason that it is indefinite and liable to misconstruction, inasmuch as its use and application in any one case may act prejudiciously on public sentiment against either the officers or the vessel to which the term is applied. We would therefore suggest that the term "*liable to have incurred infection*" be substituted for the word "suspected." The term "*liable to have incurred infection*" we would apply to any vessel coming from a port where yellow fever existed, but having no such sickness aboard, either at the port of departure or during the voyage.

2d. We would apply the term "infected" to any vessel which had yellow fever on board during her voyage, or on

which a case occurred in port, though removed immediately and treated in hospital.

3d. We would apply the term *dangerously infected* to any vessel on which cases of yellow fever occurred in port, whether treated aboard or sent to a hospital, and on which other cases occurred during the voyage.

The application of the term *infected* to localities and communities should be restricted, in our opinion, to those in which several undoubted cases of the disease in question have occurred, originating in the locality with a tendency to spread, and it should be understood that infection may be limited to a portion of a city or town, or to a single building, square or number of squares, without involving other portions. Positive evidence of these facts should be obtained through the agency of State or local boards of health. The term *infected* does not apply to localities or communities into which a case or cases of yellow fever have been introduced.

5th. The term *dangerously infected* is properly used when applied to ports, localities and communities where yellow fever prevails, endemically or epidemically.

6th. Relative to the rules necessary to be enforced with regard to vessels infected with other diseases than yellow fever as small-pox, cholera, plague, typhus fever, we are of the opinion, that to vessels dangerously infected the same rules should apply as in the case of yellow fever; that is to say, isolation, removal of cargo, thorough cleaning and disinfection.

7th. In reply to the interrogatory "as to the propriety and possibility of exempting from detention and observation on account of yellow fever, passengers or other persons who present satisfactory evidence that they have had the fever, or that they are natives of one of the West India Islands," we are of the opinion that such person should be exempt from the restrictions imposed on the unprotected; but that they shall, in all cases of an infected vessel, be detained until after proper disinfection of their apparel and effects. Only persons born in seaport towns where yellow fever is epidemic, should be regarded as exempt from yellow fever.

8th. *Satisfactory evidence* of their acclimation should be an affidavit setting forth their nativity, or their having had yellow fever, and made before the American Consul at the point of departure. In the absence of such affidavit, the quarantine official shall be required to ascertain under oath that the affiant is acclimated.

9th. As to the circumstances which would render it necessary or expedient to remove the cargo from a ship and have her thoroughly cleansed and disinfected and the cargo aired, before either is allowed to pass from the quarantine grounds; we consider that it would only be necessary or expedient to remove the cargo from a ship when she was *dangerously* infected, as before set forth. In the case of a vessel *liable to have*

been infected, or of an *infected vessel*, we think it unnecessary to disturb the cargo, but the vessel should be detained at quarantine, at the discretion of the quarantine officer, to be thoroughly cleansed and disinfected.

(Signed.) F. Loeber, M. D.
J. P. Davidson, M. D.
J. C. Beard, M. D.

Sec. 6. We recommend the following classification of merchandise at quarantine station:—

For the purpose of sanitary measures, merchandise shall be arranged in three classes.

1st. Merchandise to be submitted to an obligatory quarantine, and to purification.

2d. Merchandise subject to an optional quarantine; and,

3d. Merchandise exempt from quarantine. The first class comprises all clothing, personal baggage and dunnage, rags, paper-rags, hides, skins, feathers, hair, and all other remains of animals, cotton, hemp, woolens, and coffee in bags. The second class comprehends sugars, silks and linen, and cattle. The third comprehends all merchandise not enumerated in the other two classes. With existing quarantinable disease on board, or if there be any such disease on board within the ten days last preceding, merchandise of the first class shall be landed at the quarantine warehouse.

Merchandise of the second class may be admitted to pratique immediately, or transferred to the warehouse, according to circumstances, at the option of the quarantine-officer, with due regard to the sanitary condition of the port. Merchandise of the third class shall be declared free, and admitted without unnecessary delay.

Sec. 7. We recommend that an inspector appointed by the National Board of Health be stationed at Eadsport, whose duty it shall be to prohibit the entrance into the Mississippi river of all *dangerously* infected vessels and order the same to the quarantine station at Ship Island. The knowledge of the above (in case of adoption by the National Board) would enable the introduction of such modifying clauses in insurance policies as to avoid forfeiture or dispute.

SEC. 8. With the view of avoiding in the future any conflict of authority between the National and the local Board of Health, it shall be the duty of the local board to admit in an *advisory* capacity to *all* of its meetings, the local representative of the National Board, who shall have free access to all records; and it shall be the *duty* of said representative of the National Board of Health to be present at all meetings of the local board.

SEC. 9. In order to secure a satisfactory report of the first case of yellow fever which may occur, there shall be appointed a board of experts, whose duty it shall be to examine and report upon the existence of such a case. This board shall be composed of the resident member of the National Board, the President of the local board and a local practitioner of medicine, who shall be selected for his long experience and acknowledged ability, said physician to be appointed by the National Board from recommendations made by local *medical* associations. A majority report from these experts shall be binding upon all parties concerned, and no dissenting opinion shall be published. Their final decision shall at once be reported to the National Board of Health in cypher.

(Signed,)

D. C. HOLLIDAY, M. D.,
J. P. DAVIDSON, M. D.,
JOHN DELL'ORTO, M. D.,
SAM'L. LOGAN, M. D.,
THOS. LAYTON, M. D.,
F. LOEBER, M. D.

Dr. Holliday said: Such, gentlemen, is the report; some of the details of course will require filling up. I would respectfully say to this meeting that the President of our Association, with his usual acumen, has presented us an article written by Prof. Joynes, of Virginia, which bears so much upon this subject, covers the ground so entirely, and is so terse, concise and forcible, that if this meeting wish it, I will read it. It will occupy 10 or 15 minutes. I think it covers the whole ground and

does in it such a manner as to defy refutation. It is strictly relevant to the question at issue.

The meeting signifying its consent, the article was read.*

By the President: Gentlemen, the question is now open for discussion. I beg leave, particularly, to request those gentlemen invited here to-night, outside of the Medical and Surgical Association, to participate in this discussion.

Dr. Crawcour moved that the report be taken up section by section. Motion adopted.

The first section, being read by the Secretary, was adopted without discussion.

Second section being read, was adopted in like manner.

The Secretary then read the third section.

Dr. Crawcour said: I would move, sir, that any city within the United States, where any of these infectious diseases prevail, should be subjected to the same quarantine restrictions.

Dr. Bemiss: That is simply to include the ports of the United States in the provision of all quarantine rules.

Dr. Crawcour: That does not include what I mean. The same restrictions should be incurred by all persons or cargoes, traveling from any city or town within the United Siates, traveling by railroads or any other conveyance, so that cities should be protected from disease prevailing in any other city within the United States. I will explain: suppose scarlet fever was prevailing in the city of New York. There is nothing to prevent this disease being carried to New Orleans. Now, what I propose is, that just as much as the city of New York should be protected from yellow fever, should the city of New Orleans be protected from their diseases; and therefore there should be quarantine restrictions on railroads, or on all modes of conveyance, conveying persons or freight from the city of New York, or Philadelphia, or Boston, just the same way as they are protected from the importation of foreign diseases.

Dr. Tebault: In regard to scarlet fever, I think New York suffers from that annually. In fact, I have a work by Dr. Smith, of that city, who treats of diseases of children. He states that about one-fourth of the new born children of New

*Virginia Medical Journal.

York die annually from scarlet fever alone. Then we would have to quarantine New York every year.

Dr. Crawcour: If necessary, we will do so.

Dr. Tebault: There is now an epidemic of diphtheria in New York, and there has been for weeks past.

Dr. Devron: It is also prevailing in New Orleans, for that matter. I would like to ask is there reason to believe that diphtheria has ever been imported here.

Dr. Logan: I submit that this report does not take into consideration the question of domestic quarantine so much as the protection of our port. This is hardly the occasion on which to spring up this very difficult question, which is rather foreign to the subject. I would therefore move to lay the amendment on the table.

Dr. Crawcour withdraws his motion.

Dr. Salomon: I would move that the word five (5) be put where Dr. Holliday read blank days, so that the section should read five (5) days, and it be adopted in that way. Adopted.

Section four, being read by the secretary, was adopted.

Section five being read,

Dr. Deveron said: In regard to that report which has just been read, the question of nativity might as well be left out as far as we are concerned. In New Orleans, where yellow fever was supposed to respect the native, yellow fever had its victims in the 3d and 4th district among children and amongst natives who were old residents of the city. So that, as far as we are concerned, with the experience of 1878 before us, and other experiences, I think we had better leave the question of protection by nativity out. Let us treat them all alike, if they come from an infected port--treat them as if they were dangerous. A man may come from any of the inland towns of Cuba, and swear that he came from Havana, and how are we to know that they are not lying.

Dr. Crawcour: I think that it is a narrow view to suppose that every person who comes from a foreign country would perjure himslf. I do not think we have any evidence of any person born in the ports of Kingston or Havana, or in any of the ports of the West Indies, ever having the disease during

the prevalence of an epidemic, and I therefore should be in favor of retaining the clause. It would be supposed that the consul at the port in which the person makes the affidavit would make sufficient inquiry.

Dr. Henderson: I move that the clause be stricken out Motion seconded.

Dr. Henderson: I move that all invited guests be allowed to vote.

Dr. Logan: If this paper is endorsed by a public meeting of gentlemen invited by the Medical Association, it would not be the Medical Association's paper. I rise to a point of order. Is this a business meeting to receive a report from a committee and act upon it, or is it a public meeting? How do you know, that if we had the slightest idea that our report was to be acted upon by another body, we would have made the same kind of report? I rise to a point of order, that it is entirely and clearly unparliamentary for any other body to act upon that report. How can we issue a report as our own that has been acted upon by other bodies? Your committee must protest against their report being decided upon by any outside parties.

It may be that the Sanitary Association may wish to discuss the same subject themselves, and therefore cannot compromise themselves by mixing up in this discussion. If this report be adopted or rejected by a mixed body, nothing has been accomplished by the Sanitary Association or ourselves, singly, in the matter. It ought to come authoritatively from the Medical and Surgical Association alone; in that way it would have more weight.

If your committee was appointed by the Medical Association of New Orleans, they certainly have a right to expect that body to act upon their report.

Dr. Davidson: I was under the impression that the report of this committee would be submitted to the delegates from these different bodies, and that the adoption of the report would be a joint adoption on the part of the Association with these bodies represented here by delegations, and that the

report would come up as the embodiment of the views and feelings, not only of the profession, but that it would come up as the expression of feeling on the part of the merchants, and of all public bodies in the city of New Orleans. It might come with a power in that way as the joint action of all who are engaged in this discussion, in a way it cannot, being restricted to the Association alone.

Dr. Holliday: I would suggest that, as this Association has taken the initiative in this matter, we should get one report adopted by it; then let others take such action on it as they choose. But we want it to appear to the world that this report is the report of a Special Committee of the New Orleans Medical and Surgical Association, and as such we propose it to go forth.

Mr. Bussey: As a member of the Sanitary Association, I would suggest that members do not take part in the voting, as we would prefer to know whether a majority of the Medical and Surgical Association agree to their report. It will certainly direct us when we consider the same question.

The motion is withdrawn.

Dr. Davidson: The motion to strike out is still before the Association. It is moved and seconded that that portion relative to the nativity of persons should be stricken out. Carried.

Dr. Bemiss: I would like, Mr. President, as a member of this Association, to offer a substitute for that amendment, which would be to strike out that whole report of the committee of the State Board. I will state in a word my reasons for offering the substitute. In the first place, I think the substitution of the words "*liable to have been infected*" for the word "*suspected*" makes an alteration in the power of the quarantine agent which might be abused to the detriment of commerce. A suspected vessel is a different thing from a vessel liable to have been infected. All vessels are more or less liable to have been infected. A sailor shipped at any port may carry yellow fever or some other infectious disease in his kit. The Gen. Greene was not *suspected*, but was not only liable to have been infected, and was infected; though not touching at an infected port.

The term *liable*, gives the quarantine agent greater range of

discretion, and greater power than the use of the term *suspected.*

Dr. Loeber: I would like to ask for a definition of the word *suspected.* I think the term *liable* is more definite than *suspected.* That is just the reason the report was made out. We might *suspect* any vessel that comes from Cuba to be infected, but the question was, what vessels coming from the South have to be quarantined. By using the term *suspected*, almost any vessel coming from the South would be quarantined for 5, 10 or 15 days. We tried to define the thing so as to give more scope to the judgment of the quarantine officer.

Dr. Bemiss: My ground of objection was the use of an indefinite term. A quarantine agent might assert that all ships are *liable* to be infected.

Dr. Salomon: I think the gentlemen are laboring under a misapprehension or misunderstanding of this section. It does not define it as a ship liable to have been infected, but as liable to have incurred infection, and defines what is meant by the term, liable to have *incurred infection.*

Dr. Bemiss: I withdraw my motion.

The Secretary reads the section.

Dr. Salomon: I move the adoption of the whole of that section as amended. Motion carried.

SEC. 6. Being read by the Secretary, Dr. Devron said:

In attempting to make a distinction as to the amount of danger in the various classes of goods, we are attempting to do what we do not know anything about. For we know but little, I may say we know almost nothing as to the comparative danger of one class of goods with the other, and to make any such distinction will only open the door to misfortunes and trouble. If you want to purify, disinfect everything, ballast as well. We have not yet, at least I have not yet read that a particular portion of a cargo, if a vessel is infected, or comes from a place where yellow fever exists, is exempt from contagion and will not convey the disease. We cannot suppose the disease was introduced by that particular portion, or this particular portion. We have no positive proof, at least until we do know what yellow fever poison

is, its appearance and where it lives, to make that distinction. If I had a vote, I would vote to strike out that portion relative to distinction of goods.

Dr. Herrick: I move as an amendment, that instead of the word "optional" the word "contingent" be used, and instead of "*option* of the quarantine officer" "*discertion*" be substituted.

The amendment was accepted by the committee.

Dr. Crawcour: I move as an amendment, what Dr. Devron said. We are told that, on a former occasion, yellow fever had been carried in a bunch of bananas. Now I do not see why it could not be carried in anything else. I move that the whole of the section with regard to distinction be stricken out.

Mr. Clark: You have been told, you have seen by experience, that quarantine or a series of quarantines have been adopted from the Ohio river in every State along the Mississippi front, on every railroad that runs to this city, by Texas and by your neighboring State of Alabama. Now, sir, unless this Association can designate some article of commerce, whatever it is, or whatever it may be, that will not be the means of conveying diseases of any kind, we shall have quarantine again on the sign of a simple case of yellow fever.

It is for this very reason that this city must be able to say what can come here without being the means of bringing it. If you cannot say what can come to this city without being the means of conveying disease, how do you expect that anybody who lives in the North, the West, or the Northwest, will permit anything to come out of this city? It cannot be possible that the intelligence of the medical profession cannot designate something that is not competent to carry disease. Two years ago the State of Mississippi ordered all kinds of things to be disinfected, among other things carbolic acid, and in fact everything on the face of the earth. The board of this city refused to let fifty-seven car loads of cotton ties to come from Memphis. Now, Mr. President, those railroads running from here will experience this quarantine in a very different light to what the board does—either the National Board or the State Board.

We have a quarantine made at 7 in the morning, a quarantine raised at 7 in the evening, and so on, and so on, just as it suits the trade of these various little places, as they want to have more merchandise brought in, or have a stock on hand they proprose to sell.

I think, sir, from conversations I have had with gentlemen in Kentucky, in Illinois, in Tennessee, in Mississippi, that if this medical fraternity of New Orleans would adopt some schedule of articles that cannot be the means of conveying disease, they would be permitied to enter those States. But they will demand an expression. If this medical fraternity shall determine here to-night what may be brought into the port without its being the means of conveying disease, all those medical boards in the West and in the Northwest, will consent to have these goo ls to pass over land. I think, gentlemen, if you will but do this, it will convey confidence all over the country.

That being the case, I submit to the gentlemen here, if it is not an absolute necessity to the interest of this city, that this meeting of the medical fraternity would to-night, with its ability and its past experience, with its judgment, whether it is not an absolute necessity, sir, absolute in the fullest sense of the word, that they should adopt some well defined and fixed views.

[CONTINUED ON PAGE 801.]

[NOTE —In consequence of the prolongation of this report beyond its expected limits, and the importance of printing it all in the same issue, the remainder is placed at the end of the present number, and the space occupied by it will be taken from the succeeding number.]

D. A. MAGUIRE'S ANNUAL ADDRESS.

DECEMBER 7, 1880.

Gentlemen—It devolves on me as your President of this year to address you a few remarks. It is not my intention to offer you a didactic lecture, but a few practical observations which I may have picked up as the occasion suggested in the course of my long practice. The organization which I have the honor of addressing existed before the war, so far as St. Mary is

concerned, and possessed members which we have a right to be proud of. Let me mention two names that will never be forgotten: Dr. Lyman and Dr. Dungan, illustrious contemporaries, that would have done honor to any country. They had the medical mind, developed by observation, constant study and judicious practice, the medical heart which endeared them to every home, and made them friends of the poor, and that genial and joyful disposition which could always light with a smile and a hope the face of the patient. Their memory is as green as the ivy that covers the grave of those two brothers in art and in friendship, who loved each other during life and would not be separated in death.

Among us here to-day, I see the honorable President of our State Association, the worthy pupil and inheritor of the qualities of these great masters. Let us hope that this society may establish close bonds among us, cultivate a spirit of emulation which will promote progress, interchange of views, and an *esprit de corps* which will tend to produce mutual protection among us all and elevate the tone of the profession. It ought to act like a tribunal where doubtful questions might be solved, where approval or blame would bear equal weight and give a decisive shape to difficulties that may take place.

This country, gentlemen, offers to the practitioner many curious points. Like in most primeval civilizations, the concrete hasnot been extracted from the aggregate. It is only yesterday that the manufacturing of our staple production has been separated from its cultivation, and every man has had to grasp with the many sided necessities of every day life, and learned to be his own builder, his own blacksmith and wheelwright, and I will add, his "own doctor." This is the origin of the "sage femme" and "traiteur" that we meet with so often in our Attakapas parishes, and who trespass so often on our dominion—rude relics of the past, first missionaries of the healing art, surrounding their patients with the mysteries of the unknown. I have no doubt they accomplished some good, and had no board of health to second their failures and their executive nomenclature! And yet, gentlemen, there is no event which does not bear its

lesson. The plants which formed the universal panacea of these early evolved practitioners, if not succeeding in every case as they allowed, had certainly valuable applications, and met, sometimes, with effects so immediate and striking as to convince the witnesses and insure the fame of the administrator. Whether these remedies were handed to these early settlers by the aborigines of the country or not, there is no doubt in my mind, that many a valuable remedy is kept from the physician by his ignorance of the botany of the medical flora of this country. I have sent to botanists in this State, Georgia and Canada, specimens of the plant called by the creoles "herbe troisquarts," or three-square root, and could get no name for it. In conjunction with the vine called black-jack it forms a medicine which acts with the greatest efficacy in diseases of the bladder and prostate gland, and very superior to buchu, uva ursi and the triticum repens of Sir Henry Thompson. I could bring before you cases of hæmorrhage from the prostate of years' standing cured by it. Are any of you acquainted with the Indian remedy for felon, which invariably cures, if applied in the early stages? Datura Stramonium roots rasped in hot lard. I very much regret having failed to secure a little red vine, which an Indian hunter brought every fall to my old friend, Dr. Dungan, and which he used with much success in a variety of cases of sore mouth, and many more precious resources, that good mother nature could afford us, if we were learned enough to solve her secrets. I can't help looking kindly on this antiquated form, and when I see his mysterious ways and his devoted adherents, I am inclined to believe that civilization, instead of being a ladder, is a circle; that extremes meet; for instance, the voudou witchcrafts of the African jungles and the enthusiasm of the great French city for Jacob, the *zouave*, the *docteur noir*. I don't know of any provision of the law that can protect the regular profession from those antiquated quacks—they will disappear by the law that proclaims the survival of the fittest, and in this free country, as health commissioner Wight, of Milwaukee, remarks: "As long as people will be willing to be treated by fools, they are at liberty to do so."

Another prominent feature which the country physician will meet on his way, is the old planter and overseer, men of a lesser or greater degree of education, but of great practical good sense and observation, accustomed to minister to the care and wants of sick negroes, and in many instances very remarkable for their skill and experience. Having learnt valuable lessons from good practitioners, and being called very often to put them into practice when distance or stress of weather prevented them from calling regular assistance, these men, in many instances, acquired a self-reliance and a knowledge of the laws of disease that rendered them very valuable throughout the southern country. They formed a formidable board of examiners for new-fledged doctors, and in many instances could promote or destroy their fate. I remember during my first year's practice being called by one of these critical judges to visit a case of diphtheria. I walked out to the quarters to see the case and confirmed his diagnosis. He then told me what he had done, and remarked on the then known remedies with such ability, that I asked him why, with such a store of information at his disposal, he had ever thought of sending for me? "Ah"! he remarked, with a complacent smile: "I was not willing to shoulder the responsibility." Another of my old time friends, who was the agent of vast estates left to his care by the absent owner, had a perfect mania for treating and exhausting all known means. Whenever I was sent for, a neighbor would always remark, as he saw me pass, that there would be a death on that place that day. One day I was sent for as usual, and beheld a fine specimen of the negro race breathing his last. My friend turned to me and inquired with much earnestness, what was the disease. "That's for you to tell," I replied; "now its death's rattle." "What will you give him"? Being rather at a loss, I vaguely suggested a rum toddy. "All right", he replied, "*Il mourra en Romain.*"

All of us can remember instances of a similar nature, and will also acknowledge that many a successful case for which we received credit, might have turned out otherwise, had it not been for the timely and intelligent care of the old overseer.

Gentlemen, in these days of brilliant specialties, the merits of the country general practitioner are not held in very high repute, and wealthy patients often shrug their shoulders at him, and for sometimes unimportant ailments announce with great importance their intention of resorting to the advice of city *confrères ;* and yet they little consider the worth of their local advisers, who have toiled for and acquired their well-won distinction in many a hard-fought struggle. These victories have been won single-handed, in bleak nights under the roof of the poor, where similar cases, in more favored localities, would have called forth consultation and assistance from numerous *confrères*, and yet the day has been won by one. Don't you believe that every feature of the case, every means employed, every change noticed, are not deeply imprinted in the memory, and that a record of similar cases don't go far to make such experience invaluable? And yet no public means are ready to scatter to the world the report of such good deeds. The country physician always seemed to me an anomaly, his life an artificial one. Very often born a gentleman, or made one by a course of liberal studies, he marries according to his social position ; and exigencies of all kinds rendered necessary by his surroundings, and entirely incommensurate with his meagre income, press upon him, and visions of debt rob his wearied frame of the blessings of rest.

The busy medical man, out all day and many a night, snatching a moment's time to read a review, cannot busy himself with financial schemes for which he is almost always unfit. Trade and science don't walk hand in hand. I have never known a physician in the country grow rich on his profession —if he has done so, it has been due to circumstances outside of it, and yet God grants that he likes his calling. After years, one or two generations of friends surround him and he goes down the walk of life with smiling faces around him. His charities are of every day occurrence, and the exercise of them is so natural, that he is surprised when thanked. He has the feeling of having been useful to his fellow men, and there is happiness in that. There is a light and a warmth around his heart, which I suppose many a millionaire might envy him,

and to this busy toiler in the science of diagnosis the sincerity of truth is always apparent, whilst a quiet smile is called forth by the hollow pretences of the world.

A serious evil inflicted on the profession is its illegitimate practice by unscrupulous druggists, and I believe strenous efforts on our part ought to be made to check it. Most of these men, who are not professional pharmaceutists, but of average intelligence, with a large stock of patent medicines on hand and the prescription book filled up by regular practitioners, and a knowledge of the cases for which the medicines have been prescribed, do not hesitate, in order to sell their wares, in button-holing negroes and ignorant persons, and on the plea of cheapness deprive us of a great deal of cash remunerative practice. I see the wrong is general throughout the country, as noticed in complaints made by New York physicians, who are disposed to dispense their own drugs, rather than submit to this imposition. Unfortunately the preparation of one's own medicine demands capital and time which many of us can't dispose of, and the only measure to repress such ill practice would be a union among ourselves to oppose it by all means in our power. This would soon break down the system, and I submit the subject to your appreciation to be voted upon.

In the last session held at New Iberia, a committee was formed to inquire into means of regulating a tariff for fees. I have written to the parish societies in correspondence with the State society, and have received a few answers which I will read to the Society. They will show the feeling of the profession on that subject. A form of tariff was sent me through Dr. Kauffman, senior physician of West Feliciana, which I will submit to you for approval. I believe it would suit this part of the country, if it could be adopted and carried through unanimously.

You will see that I also proposed a plan of mutual insurance among the members of the State. Such forms of union and protection prevail among other bodies, and I believe would answer in ours. If this meet the approval of the President of the State Society, it would be proper for him to suggest it at the next meeting of the Society.

Reviews and Book Notices.

A Treatise on Diphtheria. By A. Jacobi, M. D., Clin. Prof. of Diseases of Children, Col. Phys. and Surg. New York, etc. 8vo. Pp. 252. New York: William Wood & Co. 1880. [Sold by Armand Hawkins, 196½ Canal st., New Orleans.]

This work is the outgrowth of papers contributed to medical journals in 1860 and 1875, and to C. Gerhart's Handbuch der Kinderkrankheiten in 1877.

In his preface, allusion is made to the recent researches of Drs. H. C. Wood and Henry F. Formad, on the effects of inoculating the lower animals with diphtheritic exudation, which have been published in Supplement 7, of the National Board of Health Bulletin. Experiments by inoculating subcutaneously and in the mucous membrane of the mouth were made in thirty-two instances, only six of which resulted fatally, and in only one was there any appearance of diphtheria. No micrococci were found in the blood or internal organs, though this result had been previously announced by Oertel; but the internal organs were found tubercular, as is the case after inoculation with any ordinary matter.

It has been observed that a pseudo-membranous tracheitis may follow the placing of exudation matter in the trachea; but the same thing may follow the application of ammonia or of organic matter, like pus. It is concluded that bacteria have no direct effect in diphtheria, by self-multiplication in the system after gaining admission; though it is admitted that they may act on the exudation already present, as the yeast plant acts on sugar, and so develop a septic poison, which produces the constitutional symptoms of diphtheria. As one attack affords no immunity from the disease, it is to be classed with the septic affections, which may occur repeatedly. In concluding his reference to their researches, Dr. Jacobi expresses his gratification at their confirming the position held by him in the text of this work.

The book is divided into nine chapters, as follows: I. History; II. Etiology; III. The Manner of Infection; IV. Contagion and Incubation; V. Symptoms; VI. Anatomical Appearances; VII. Diagnosis; VIII. Prognosis; IX. Treatment.

Its history is traced back authentically to Aretæus. Galen and Cælius Aurelianus also treated of the malady, but there is a gap in its history during the middle ages. The disease appeared in Massachusetts in the first half of the seventeenth century, was well known in the American colonies and in the British islands during the following century, but was first described under its present name by Bretonneau, of Tours, in 1821.

As to etiology, he considers the presence of bacteria as not proven; and even in anthrax and relapsing fever, where the presence of the peculiar parasite has been established, he regards the poison as chemical in its nature, rather than organic.

The disease is highly contagious, and domestic animals are subject to it. Mild cases may give rise to serious ones, and *vice versa.*

With respect to the important and still open question of the identity or duality of membranous croup and diphtheria, Dr. Jacobi remarks, in Chapter VI: "Can pseudo-membranous croup be distinguished from diphtheria? Ought these terms to be preserved separately? Are they different processes? Let us suppose two cases of membranous impediment in the larynx, the one with, and the other without, membrane in the pharynx, the other symptoms being the same, is one diphtheria of the larynx, and the other croup? Suppose again, a membranous stenosis of the larynx, to which is only later added a membrane of the pharynx, was the case originally one of croup, which became diphtheria later on? Thirdly, take two cases of laryngeal stenosis, one with symptoms of suffocation only, the other having these symptoms together with adynamia; is the latter diphtheria alone, the former only croup? In my opinion, it is just as little possible to differentiate these diseases according to the seat of the morbid product, as it is justifiable to deny the title diphtheria to membranous pharyngitis when few general symptoms, such as fever, debility and collapse happen to be present."

In Chapter VII, he remarks on the diagnostic tables of Fleischmann and J. Solis Cohen, which differentiate croup and diphtheria in parallel columns, that "hardly a single case of either could be appropriately placed beneath either head." He would thereforeregard croup merely as a form of diphtheria, in other words as diphtheritic laryngitis, limiting its applicability to pseudo-membranous stenosis.

A further explanation of the identity of the two is our own

suggestion: croup is diphtheria seated primarily in the larynx, running to fatal suffocation so speedily that the other symptoms have not time to appear, or running so mild a course to recovery, that they are not manifested, as is found when it touches lightly other localities.

With regard to treatment, nothing need be remarked here. The author's views are in accordance with the best authorities.

Of the work as a whole, we must express a very favorable impression. Owing to the general prevalence of diphtheria in our country, it is specially timely and will prove highly acceptable to thousands of practitioners. S. S. H.

Photographic Illustrations of Skin Diseases. By George Henry Fox, A. M., M. D., Clin. Prof. of Dermatology, Starling Med. Col., Columbus, Ohio, etc. 48 Colored plates taken from life. 4to. New York: E. B. Treat. 1880.

The first eight parts have already been noticed in previous issues of this JOURNAL. The four concluding ones are now before us. The subjects illustrated and treated are as follows:

Part IX. Kerion, Lepra Maculosa, Molluscum, Erythema Multiforme.

Part X. Phtheiriasis Capitis, Phtheiriasis Corporis, Scabies, Porrigo e Pediculosis.

Part XI. Herpes Facialis, Hydroa Bullosum, Erythema Circinatum and Exfoliatum, Purpura Simplex.

Part XII. Cornua Cutanea, Alopecia Areata, Morphœa and Scleroderma, Sarcoma Pigmentosum.

This work has already received favorable notice at our hands, and also flattering encomiums from the leading teachers and writers on Dermatology in the country. It is not a systematic treatise, nor intended as a substitute for one, but is a most valuable adjuvant, especially to general practitioners, who are not constantly meeting cases of skin maladies, and might be at a loss in diagnosis. S. S. H.

Photographic Illustrations of Cutaneous Syphilis.—By George Henry Fox, A. M., M. D., Clinical Lecturer on Diseases of the Skin, College Physicians and Surgeons, New York, etc. 4to. New York: E. B. Treat, 747 Broadway. 1880.

This work is a continuation of Photographic Illustrations of Skin Diseases, by the same author, which has received

favorable notice in this journal. The present work, like the other, will consist of 12 parts, each containing 4 pages of illustrations and 8 pages of printed matter. As the photographs were taken from living subjects and afterwards colored by the hand of an artist, they must be true to nature and, if indelible, as is claimed, must afford the truest and most valuable aids to the study of the diseases represented.

The three parts before us contain the following illustrations:

1. Syphiloderma Erythematosum (breast and back);
   Pigmentatio Post—syphiliticum;
   Leucoderma Post—syphiliticum;
   Syphiloderma Erythematosum.
2. Syphiloderma Papulosum Lenticulare;
   Syphiloderma Papulosum Miliare;
   Syphiloderma Papulosum Squamosum (breast and shoulder);
   Syphiloderma Papulosum.
3. Syphiloderma Papulosum Circinatum;
   Syphiloderma Papulo—squamosum;
   Syphiloderma Papulo—pustulosum;
   Syphiloderma Pustulosum.

The publication of the second series of this work is proof of its favorable reception by the profession. The price is apparently high, $2 for each part, but not too much when we consider the cost of the plates. As an aid to diagnosis, they will be invaluable to the general practitioner in the country, away from hospital privileges, and quite serviceable to all as often as they may meet skin affections. S. S. H.

Differential Diagnosis: a Manual of the Comparative of Semeiology of the more important Diseases. By F. de Haviland Hall, M. D., Asst. Phys. to Westminster Hosp., London. Second American Edition. Extensive additions. Edited by Frank Woodbury, Physician to the German Hospital, Phila. 8 vo. Pp. 223. Philadelphia: D. G. Brinton. 1881. [Sold by Armand Hawkins.]

The first American edition of this work received notice at our hands just two years ago. The additions mentioned on the title page were mostly made by the American editior of the

former edition, and the present one is found to differ but slightly from it. The arrangement of exhibiting differential diagnosis between two diseases by parallel columns is a commendable feature. It is evident that the book has proved acceptable to the profession, from the fact that another edition is so soon required.

How to use the Forceps, with an Introductory Account of the Female Pelvis and of the Mechanism of Delivery. By Henry G. Landis, A. M., M. D., Prof. Obstet. and Dis. Women and Chil., Sterling Med. Col. Illustrated. 12 mo. Pp. 168. New York: E. B. Treat. 1880.

This little work is nearly equally divided into two parts, treating respectively of the Mechanism of Labor and the Forceps. No originality is claimed by the author for any fact, opinion or principle enunciated, and we have not been disappointed in discovering any. It presents what is generally known and approved by the best informed obstetricians of the day in a small volume, which is simply more convenient to consult than a large systematic work.

A Treatise on the Principles and Practice of Medicine: designed for the use of Practitioners and Students of Medicine. By Austin Flint, M. D., Prof. Principles and Practice of Med. and Clin. Med., Bellevue Hosp. Med. Col., etc. Fifth edition, revised and largely rewritten. 8vo. Pp. 1150. Philadelphia: Henry C. Lea's Son & Co. 1881. [Sold by Armand Hawkins, 196½ Canal st., New Orleans. Price, in half-Russia binding, $7.]

It is unnecessary to make an extended notice of a book which has reached five editions, with repeated emendations, within fifteen years. As nearly eight years have elapsed since the appearance of the previous edition, many changes have been needed to keep up with the progress of medicine, and the author states that "time and effort have not been spared for this end."

In the work of revision he acknowledges the services rendered by Dr. Wm. H. Welch, in part I, on General Pathology, and in the anatomical description of diseases throughout. In the latter respect, this edition will be found more complete and

full than previous ones, while some matter has been necessarily omitted and other matter condensed to save space.

The following candid statement is greatly to the credit of Prof. Flint, who has no fear of the bugbear, inconsistency: "In making these changes, the author has not been influenced by any sense of obligation to maintain consistency of views with the previous editions of this treatise, or with other works which he has written. Whenever statements are found to vary from those made at a prior date, the simple explanation is that the latter, in the light of more recent reflection and enlarged knowledge, seem to him no longer tenable. He has endeavored to regard his own writings, in this point of view, divested of the partiality of authorship, and to subject them to as critical an examination as if they were the writings of another."

A notable example is his present view of the nature of croupous or lobar pneumonia. While most medical men still consider it a local inflammatory affection, Prof. Flint has come to regard it as a specific general disease, and he would prefer the appellation *pneumonic fever*. The principal grounds of this belief are thus stated (pp. 180–1): "In relation to the morbid anatomy, the quantity of exudation, amounting to from one to two pounds, if a single lobe be affected, and sometimes reaching four pounds if the affection embrace an entire lung; the derivation of this matter from the blood in the branches of the pulmonary artery; the removal of the exudation by absorption, leaving the air-vesicles intact; the extension over a lobe by degrees, the progress often being slow; the invasion successively of a second and third lobe in a certain proportion of cases, and the laws of the disease, as regards the greater liability of the lower lobes and of the lower lobe of the right lung—these are the points which, to say the least, are suggestive of the dependence on a constitutional morbid condition, the latter being essentially the disease. It is not easy to reconcile the pathological facts just stated with the doctrine that the pneumonic products are the results solely of a local inflammatory condition; and if a prior constitutional condition be essential, that condition is fever. In some regards the anatomical characteristics of pneumonic fever bear a close analogy to those of typhoid fever."

If the author needs any analogy with an acknowledged constitutional malady, we think acute rheumatism would suit better than typhoid fever. But we are far from being convinced by the above considerations. His statement, that acute lobar pneumonia is never produced by such extrinsic causes as con-

tusions and penetrating wounds is contrary to the general testimony of medical men, and to our personal observation, if the crepitant râle be a diagnostic sign, as acknowledged by Dr. Flint himself. His declaration that large doses of quinine may arrest the disease within 8 or 10 hours, would indicate that, in the cases observed, the condition resulted from malarial congestion rather than from a morbific agent akin to that of typhoid fever; and in fact we recollect a remarkable case of paroxysmal fever, attended with periodic pulmonary congestion and running through all the stages of pneumonia to gangrene and death.

His axiom, "that patients with fever do not take cold," as applied to pneumonia, we apprehend is about as correct as another enunciated by him a few years ago, that consumptives enjoy an immunity from danger of intemperance in the use of alcoholic beverages. In this work he is less positive about the safety of using alcohol.

In this connection we remark, that a few years ago, Prof. Flint entertained similar notions respecting the nature of sporadic dysentery—that it is an essential disease, non-recurring, tending to recovery, and little, if at all modified by treatment. At present he seems to have abandoned the notion of specificity and self-limitation; but finds no instances of recurring attacks in the same individual, which is contrary to general observation.

Dr. Flint still adheres to his old opinion of the essential tuberculous nature of pulmonary consumption, while alluding to the theory of the German pathologists, of the inflammatory origin of most cases.

We cannot devote further space to this work of a great teacher and author. The reader may be assured that the fifth edition represents his latest opinions; but, as surely as the world moves, the sixth may show essential changes. Such candor and honesty must command our respect, though there may be an occasional suspicion of new conclusions too hastily taken.

The mechanical execution of the book deserves praise, being one of a series of standard works issued in uniform half-Russia binding, and printed on superior paper. S. S. H

Medical Heresies Historically Considered. By Gonzales C. Smythe, A. M., M. D., Prof. of the Practice of Medicine, Central College of Physicians and Surgeons, Indianapolis, and Member of the American Medical Association. [Sold by Armand Hawkins, 196½ Canal street, New Orleans.]

The author of this little volume has endeavored briefly to trace the history of the origin and development of practical medicine, together with the different theories and schools resulting therefrom, which have from time to time exercised a controlling influence on the public mind. While some would seem to have retarded the steady advance toward a rational system of medicine, each seems to have had a special mission to accomplish in the gradual evolution of the principles accepted at the present day. He divides the subject into three periods:

(1) The mythological—embracing that period from the infancy of the human race to 400 years B. C.

(2) The Dogmatic or Empirical—that period from the year 400, B. C., to the close of the 18th century.

(3) The Rational—from the beginning of the 19th century to the present.

The greater part of the work, however, is devoted to a review of the principles of Homœopathy. He quotes largely from the writings of Hahnemann in discussing such fallacies as that "dilution, agitation and trituration of medicines imparts to them a dynamic power or force, not possessed by them as material agents;" in fact his whole criticism is perfectly free from misrepresentation and abuse, and his arguments in reference to the errors of the entire theory are singularly logical and conclusive. He plainly shows that the Homœopathic practitioners of to-day are divided into two classes:

(1) The Liberals;

(2) The straight-jackets.—

The first destined to become eclectics—the second to return to the pure and unadulterated doctrines of Hahnemann, which consists:

(a) In the law of similars.
(b) The totality of the symptoms.
(c) The single remedy.
(d) The minimum dose of the dynamized drug.

J. M. W.

A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M. D., Prof. of Diseases of Children in Bellevue Hospital Medical College, Physician to the New York Foundling Asylum, and to the New York Infant Asylum, etc., etc. Fourth edition, thoroughly revised. Published by Henry C. Lea. Philadelphia. [Sold by Armand Hawkins, 196½ Canal street.]

The fact of this work having reached its fourth edition, is in itself a sufficient evidence of its well merited popularity and success. No work on this subject has ever more clearly defined the nature, symptoms, pathology and treatment of the diseases incident to this period of life. In entering upon the work, the author devotes considerable time and space to a consideration of the care necessary to be exercised by the mother during pregnancy, and in the course of his remarks dwells at some length on the popular belief of many physicians as to the effect of vivid mental impressions on the development of the fœtus. His chapter in reference to the "Mortality of early life, its causes and preventions," is replete with interest, and contains many valuable suggestions on a matter which demands the attention of every physician, especially those who practice in large cities where the mortality at this age is so great.

As to lactation, artificial feeding, clothing, etc., much has been said of practical importance, and the articles under each head are deserving of careful study.

He next treats of the diseases occurring at this period, including under the head of constitutional diseases:

(1) Diathetic diseases, as scrofula, syphilis, etc.

(2) Eruptive diseases, as measles, scarlet fever, small-pox, etc.

(3) Non-eruptive contagious diseases, as diphtheria, pertussis, etc.

(4) Other general diseases, as malaria, typhoid, cerebro-spinal fever, etc.

Parts third is devoted to a consideration of—

(a) Diseases of the cerebro-spinal system, as congestion of the brain, meningitis, hydrocephalus, chorea, etc.

(b) Diseases of the respiratory system, as catarrhal laryngitis, bronchitis, pleurisy, pneumonia, etc.

(c) Diseases of the digestive apparatus, as stomatitis, diarrhœa, cholera infantum, gastro-intestinal hemorrhage, etc.

(d) Diseases of the circulatory system, as cyanosis.

(e) Diseases of the skin, as erythema, eczema, etc.

The work is admirably arranged, as regards its classification, and each subject has received the closest attention. As a text-book, both for physicians and students, it fully deserves the highest recommendation. J. M. W.

Popular Science Monthly for January, 1881.

The present number, besides containing its usual amount of interesting matter, publishes an article by Dr. Leonard Waldo, entitled: *Examination of Thermometers at Yale Observatory*, which is worthy the attention of physicians, as it describes the manner there practiced of testing clinical and other thermometers.

"It is the object of the observatory to make this service as widely popular as possible; and it particularly desires to be useful to the physicians and others who have occasion to use fairly accurate thermometers." Directions are also given how any physician may send his thermometers and have them returned with certificate, stating their deviation from the true standard.

This is especially important, inasmuch as it is well-known to practitioners that many of these instruments coming from the maker's hand lack accuracy.

Among the articles especially interesting to the profession are:—Article II, on *Diet*, by FELIX L. OSWALD, M.D., and Article XIV., on *Distinctions Between Real and Apparent Death*, by DR. WILLIAM FRASER. L. F. S.

Geo. P. Rowell & Co's American Newspaper Directory, containing accurate lists of all the newspapers and periodicals published in the United States, Territories, and the Dominion of Canada, together with a description of the towns and cities in which they are published. Small 8vo., Pp. 1044. New York: Geo. P. Rowell & Co. 1880.

The title of this publication indicates clearly enough its character. The arrangement is by States and towns alphabetically. The publications are described according to frequency of issue, politics, religion or other leading feature,

size of sheet, price, editors and publishers, and circulation. There are also lists of papers, classified according to branches of knowledge to which they are specially devoted, and languages in which they are printed. Nearly half of the latter part of the volume is filled with advertisements of various journals.

The plan of this work is excellent; and, if carried out faithfully, it must be of inestimable value to advertisers. We regret to observe, however, that its accuracy cannot always be depended on. Though this *Journal* has been issued monthly for more than three years, it is still described as a *bi-monthly.* Again, we observe the following in one of our exchanges:

THE BLACKMAILER.—The Obstetric Gazette says, that Rowell's American Newspaper Directory puts the circulation of the Gazette as under five hundred. Yet, at Rowell & Co's request, they were notified that the regular circulation of the Gazette was three times that amount; but then it did not advertise with the Rowells.

And again: Of Rowell's American Newspaper Directory for 1880, the Philadelphia Medical and Surgical Reporter says it is incorrect so far as the circulation of the Reporter is concerned. Further, the Reporter says that, as requested, it sent to Messrs. Rowell & Co. a statement, sworn to by the printer, giving the exact circulation of the Reporter. This statemant was suppressed, and a decidedly lower one entered. Other parties claim that they have been unfairly dealt with. As these parties did not accompany their statement with an advertisement, they are unable to say whether the error occurred through mistake or other reasons.—*Detroit Lancet.*

Such statements are extremely damaging to the reputation of the publishers, and the imputation of blackmailing is quite natural, whether actually deserved or not. In any case they should be more careful. S. S. H.

The Art of Prolonging Life.—By Christopher William Hufeland. Edited by Erasmus Wilson, M.D., author of A System of Human Anatomy, etc. From the last London edition, 12 mo., Pp. 298. Philadelphia: Lindsay & Blakiston. 1880. [Sold by Armand Hawkins, 196½ Canal street.]

We have here a new presentation of a work written more than eighty years ago by one of the most eminent medical writers and teachers of his day. The present translation from the original German was made in the last century, so that

nothing remained for the editor, except to expurgate some passages not acceptable to the more fastidious taste of our day and eliminate others which might prove tiresome.

It is remarkable that the personal hygiene taught in a previous century should approach so nearly to what is now accepted, while the therapeutics of that day is well nigh obsolete. This volume, therefore, is not merely interesting as the contribution of an old master still famous, but possesses an actual value as containing sound lessons for the present generation.

S. S. H.

School and Industrial Hygiene.—By D. F. Lincoln, M.D., Chairman Department of Health, Social Science Association. 16 mo., Pp. 152. Philadelphia: Presley Blakiston. 1880. [Sold by Armand Hawkins, 196½ Canal street.]

This little volume is No. XII of the Series of American Health Primers, several of which have already received favorable notice in our pages. It is full of judicious advice, part I being specially adapted to school superintendents and teachers, and part II to those engaged in industrial pursuits. Though intended for popular reading, much of the contents will be found both interesting and useful to medical men.

S. S. H.

Books and Pamphlets Received.

The Bacteria. By Dr. Antoine Magnin, Licentiate of Natural Sciences, Chief of the Practical Labors in Natural History to the Faculty of Medicine of Lyons, etc., etc. Translated by George M. Sternberg, M. D., Surgeon U. S. Army.

The Treatment of the Genito-Urinary Organs, the use of Electricity, Damiana, etc., etc. By John J. Caldwell, M. D., 65 North Charles street, Baltimore, Md.

Biennial Report of the President of Fire and Police Commissioners of the Taxing District (Memphis), Shelby County, Tennessee, to the Governor of the State, December 1, 1880.

Annual Report of the Surgeon-General United States Army, 1880.

Diet for the Sick.—Merlin's Pocket Series No. 1. By J. W. Holland, M. D., Professor of Materia Medica, Therapeutics, etc., in the University of Louisville.

Tenth Annual Report of the Directors of the Maine General Hospital; with the Reports of the Treasurer and Resident Physician, 1880.

The Surgical Treatment of Intestinal Obstruction; a Paper read before the Tri-State Medical Society, during its Annual Session in Evansville, Indiana, November, 1879. By W. T. Briggs, M. D., Professor of Surgery in the Medical Department of the University of Nashville, and of Vanderbilt University, Nashville, Tenn. Reprint from the Nashville Journal of Medicine and Surgery.

Genital Irritation, together with some remarks on the Hygiene of the Genital Organs in Young Children. By Roswell Park, A. M., M. D., Demonstrator of Anatomy, Chicago Medical College, etc. Read before the Chicago Medical Society, October 18, 1880. Reprint from the Chicago Medical Journal and Examiner, for December, 1880.

What the States Owe the People; Public Herlth is Public Wealth. A paper read by Hon. Erastus Brooks, of New York, at the eighth annual meeting of the American Public Health Association at New Orleans, La., Thursday, December 9, 1880.

Phthisis Pulmonalis and its Treatment with Hypophosphites. By L. De Brémon, M. D., University of Paris (France), Knight of the Legion of Honor; Member of the Order Imperial Ottoman Medjidié (5th Class); Member of the New York County Medical Society, etc., etc., late Clinical Assistant to Dr. J. H. Churchill, Paris.

L'Art D'Apaiser les Douleurs de L'Enfantement, par J. C. Faget, Docteur de la Faculté de Paris, Chevalier de la Légion d'hon-neur.

Vick's Floral Guide, 1881. James Vick, of Rochester, N. Y.

Unabridged Reference List of Newspapers and Magazines—Chicago, Ill. and New York, for 1881.

Meteorological Summary—December.
Station—New Orleans.

Date.	Daily Mean Barometer.	Daily Mean Temp'ture.	Daily Mean Humidity.	Prevailing Direction of Wind.	Daily Rain-fall.	General Items.
1	30.021	70.2	90.7	S. W.	12	Highest Barometer, 10th, 30.595.
2	30.157	65.5	82.0	North	08	Lowest Barometer, 16th, 29.795.
3	30.076	63.7	88.3	East.	36	Monthly Range of Barometer, 0.800.
4	29.912	71.0	87.7	South	02	Highest Temperature, 78° on 5th.
5	29.876	73 2	89.0	S. W.	87	Lowest Temperature, 20° on 30th.
6	30.300	53.7	50 7	North	18	Greatest Daily Range of Temperature,
7	30.480	47.7	41 3	North	.....	24° on 8th.
8	30 369	55.2	61 7	S. W.	.....	Least Daily Range of Temperature 2°
9	30.471	53.7	64.0	North	.....	on 2d.
10	30.533	46.0	37.7	North	.....	Mean of Maximum Temperatures, 59.1°
11	30.357	47.7	43.3	N. E.	.....	Mean of Minimum Temp., 47.2°.
12	30.071	56.2	68.0	S. W.	01	Mean Daily Range of Temp., 11.9°.
13	30.001	61.2	85.0	S. W.	06	Prevailing Direction of Wind, North.
14	29.995	64 2	84.0	South	.....	Total Movement of Wind, 6,305 miles.
15	29.915	66.0	91.3	South	07	Highest Velocity of Wind and Direc-
16	29.831	71.5	92.3	South	.....	tion, 26, North.
17	29.875	65.7	98.3	South	2.00	Number of Clear Days, 7.
18	29·899	63.5	82.0	North	03	Number of Fair Days, 12.
19	29.937	50.5	80.7	N. W.	71	Number of Cloudy days on which no
20	30.147	42.0	58.0	N. W.	...	Rain fell, 6.
21	30.269	41.2	63.3	North	.....	Number of Cloudy Days on which
22	30.287	42.7	64.0	North	.....	Rain fell, 6. Total number of days
23	30.210	47.0	69.7	N. E.	02	on which rain fell, 18. [30, 31.
24	30.071	53.5	79.3	East.	1.05	Dates of Frosts, 8, 10, 11, 21, 22, 28, 29,
25	30.150	48.0	74.0	N. W.	10	
26	30.171	44 0	65.0	North	.....	
27	30.183	44.7	64.3	N. W.	.....	
28	29.944	44.7	65 7	North	10	
29	30.305	26 2	60.0	N. W.	67	
30	30.449	29.2	48.7	N. W.	....	
31	30.339	33.5	54.3	N. W.	*	
Sums	934.601	1643.1	2184.3	.....	6.45	
Means	30.148	53.0	70.5	North	....	

COMPARATIVE TEMPERATURE.

1871.....		1876	48°.08
1872.....		1877.....	55°.5
1873	56°.63	1878.....	51°.2
1874.....	58°.77	1879.....	59°.8
1875.....	61°.5	1880	

COMPARATIVE PRECIPITATION

1871.....	inches.	1876:	9.57 inches
1872.....	"	1877:	4.96 "
1873:	1.79 "	1878:	8.69 "
1874:	3.27 "	1879:	2.90 "
1875:	5.15 "	1880:	"

*Too small to measure.

L. DUNNE,
Sergeant, Signal Corps, U. S. A.

Mortality in New Orleans from December 11th, 1880, to January 15th, 1881, inclusive.

Week Ending.	Yellow Fever.	Malarial Fever.	Consumption.	Small-pox.	Pneumonia.	Total Mortality.
December 18	0	3	18	0	5	107
December 25	0	2	21	0	7	98
January 8	0	1	24	0	12	129
January 15	0	1	22	0	24	145
Total....	0	7	85	0	48	479

REPORT OF COMMITTEE ON QUARANTINE. NEW ORLEANS MEDICAL AND SURGICAL ASSOCIATION.

[Continued from page 781.]

I have been through quarantines two summers—1878, very bad—1879, fortunately not very serious, but bad enough, upon a single telegram that there was a case of yellow fever, to have Tennessee, Mississippi and Alabama quarantine against the very trains.

We must do something to quiet the fears of these crazy people, and I ask here to-night, sir, in behalf of the interests I represent, in behalf of the interest of New Orleans—and I do not represent any interest except the interest that is material to the prosperity of New Orleans—I ask this meeting to put such an emphatic endorsement on this question of quarantine, as will enable us not to be embargoed as we have in the past, at least so far as the sense of justice and reason is concerned.

Dr. Bemiss: I am sure, Mr. President, that the learning and experience of our profession warrant the classification of all portable material or things in accordance with their liability to convey infection. I think it was at the International Medical Congress of 1853 that this suggestion was first made, and I would favor the adoption of the proposition just as it comes from the committee, with the alteration of one word: instead of "*shall*" in the last clause, insert "*may*" be admitted.

There might be certain circumstances that would require the quarantine officer to hold goods of that class. Give him discretion. He *may* permit it to pass, not that he *shall* do so.

Mr. Fentress: I think this is the chief thing on which we have been depending, and we trust that it will not be passed over without full discussion and settlement, and that some means shall be devised by which there may be made a distinction which will be recognized by every member of the medical profession. It is horrible, the way those little cross-roads quarantine New Orleans. We do not want to carry any disease anywhere. It is our interest, as well as the interest of New Orleans, to have our commerce as unrestricted as we can.

If the medical profession of New Orleans cannot make any kind of distinction between a tombstone and woolen clothing, or between whiskey and woolen clothing, and cannot make some schedule that we can be guided by, all this quarantine question might just as well be laid aside.

The thing is, if the Medical profession can agree upon any kind of articles, that in their experience and observation are not apt to carry disease, they ought not to be put in the same catalogue with others. The thing is to distinguish, as far as science will allow you to go, so that we may have something practicable to carry before an ignorant community. That is the end we are lookingat, and it is for the medical profession here to say whether they can accurately settle it. There is no Doctor that is perfect in anything, but you have sense and experience, the teachings of your profession, and that certainly should enable you to make some sort of distinction, even though it is not a perfect one. You may make mistakes, but they can be corrected as experience learns. There are some things, certainly, that are not liable to carry infection.

Dr. Holliday: I would beg to state, that I do not see the object of discussion, when we have tried to adopt such a schedule. It is very extended, although the wording is verbose. It includes a great many articles. We submit this as a practical solution, and as such, we propose to lay it before the Association, and get their opinions, and we have done all that we can do, to satisfy the community that there are articles that may be allowed to go through in three separate classes.

Dr. Crawcour: The reason I made the amendment, was that I do not believe that woolen goods or any article coming from a city in which yellow fever may prevail, can carry the disease to another place, unless such articles have been in direct contact, or worn by persons suffering from disease at that time. I do not believe disease can be introduced by articles that have been in the premises, and have not been in contact with the people. I withdraw my amendment.

Dr. Tebault referred to the case of the bark Excelsior last summer, fifty-six days from London, where four of the the men were taken with yellow fever after her arrival in port.

He said the cargo of coffee was unloaded, and before steps could be taken it was shipped in three different directions, and nowhere in any of these three points could be traced a single case of yellow fever. No cases occurred on any of the steamboats, railroads, or localities receiving this coffee. None of the persons who unloaded the ship were infected from the coffee. The ship was disinfected at quarantine station, yet after she had been unloaded four cases occurred. Not a single one unacclimated who had anything to do with that cargo suffered from the disease.

Dr. Devron: As to its not being traced to the coffee, it is unfortunately the fact that we did trace it to the coffee. If the quarantine of Louisiana had been provided with acclimated laborers, in all likelihood we would never have heard of yellow fever in New Orleans last year; the sea-faring men were made to handle the coffee first, and it was there they contracted the disease. If it was not contracted in that period of time, I would say it was not yellow fever, but "rice fever."

The 6th section was adopted as amended.

SEC. 7. Read and adopted.

SEC. 8. Read by the Secretary.

Dr. Richardson suggests that instead of "*the*" local, say "*a*" local representative.

Dr. Salomon: Inasmuch as the report of this committee, as I understand it, is meant to refer not only to the port of New Orleans, but to all places interested in quarantine, there may be a State or city where there is no local member of the National Board of Health; in that case the National Board may send a representative, and I agree with Dr. Richardson that it should read in that way. I move that *a* be substituted for *the*. Motion carried.

Section 8, as amended, is adopted.

Section 9 read by the Secretary. It is moved and seconded that it be adopted.

Dr. Tebault calls for the yeas and nays. He would like to vote in the negative on that subject. He thinks that when a physician has graduated and has been thought competent to practice in the State, and he has been practicing for a number

of years, that he ought to be competent to diagnosticate his own cases. He thinks, if we have a right to treat life in such a case, we certainly ought to have the right to diagnosticate that case. He certainly can call his friends in for the purpose of satisfying his mind on the subject; but to make one physician the arbitrator and the guide in such a matter, all over the city. He does not think it is right, and proposes to vote no upon that recommendation.

Dr. Loeber: It is not one in this city, but three. The President of the State Board, the representative of the National Board, and the third one is elected from the city here; and then the majority will decide as to its being yellow fever or not.

Dr. Crawcour: I think a physician should be very glad to have such assistance. I should be very glad to have the assistance of two or three more physicians to satisfy me whether it was a case or not.

The responsibility is very great and I do not think any one man would have the right to state absolutely that it was or was not a case of yellow fever.

Dr. Henderson: I agree with Dr. Crawcour. If I had a suspicious case of fever, I would assuredly be glad to have assistance and consult with others before I would report to any Board.

It is moved and seconded that the 9th section be adopted. Carried.

Dr. Crawcour moved an addition to the above, which, after a few remarks by Dr. Holliday, he withdrew.

Mr. Booth: I am opposed to the report of the Committee, because it absolutely intrudes on the State Board a member who shall take part in its transactions, and who will be appointed by an authority outside of the State. The organization of the State Board is at present fixed by law, and we have no right to exercise such authority over it. The recommendation of the committee under these circumstances must be impracticable, and should be classed as illegal.

Dr. Devron: I am here as a representative of the Sanitary Association, and as a medical man, I stand here also as an ex-

member of the Board of Health, ready to defend it, and as proud as any would be to make it as powerful as it can be. If I thought that you meant by these resolutions to say to the board you shall do this, you shall do that, then I think they should rise and say, we shall do what we please. But I do not think that you, gentlemen, in preparing these resolutions, meant to do anything more than to express your views on the subject, leaving it to the Board of Health to do what they think is right and what is just. The Board of Health, as the gentlemen here know, has good laws. The State Board of Health has a great deal of power, apparently; but we know, in reality, it has but little. To do work, you must have money, and you know how much the State Board has. You say to the Board of Health, we entrust you with the lives of the people of Louisiana, and at the same time entrust them with the lives of the whole Mississippi Valley, and what do you do it with? With rules and regulations. The duty of the President of the Board of Health is to devote his time and attention to making such rules and regulations as shall insure the faithful protection of New Orleans, and Louisiana. But where shall we get the money? From taxation, which the highest court of Louisiana, declares to be illegal. The gentlemen should not forget that the Board of Health violates the laws of the United States, by exacting money on tonnage, so that they can receive fees to pay their salaries to their officers. Then admitting, for the sake of argument, that those fees were legal that they received, is there a sufficiency of those fees to pay every officer and sufficient to maintain a proper force of laborers to prevent the misfortune of the "Excelsior." They should have the means to repair and build. They should have the means to buy sufficient land beyond that quarantine station, to remove that hospital from the neighborhood—that hospital in respect to which we are informed by a member of the Board of Health, that he saw children of the neighborhood playing at the windows, making suspicion strong abroad that there was yellow fever there, last summer. The Board of Health, gentlemen, you can not deny, have not the means provided. They have rights which they can not resign to anybody else. I am

willing to believe, gentlemen, every member of the Board of Health is actuated by nobler motives than that of pecuniary consideration. Neither this association, nor any other body, can compel them to admit an extra member. I have no doubt that those gentlemen, having at heart the interest of the whole country, will invite the gentlemen, as doctors, to share with them the responsibility.

Dr. Crawcour moves the adoption of the report as a whole, and says: the adoption of this report will remove the State Board of Health from all responsibility, and make the National Board of Health responsible. If yellow fever should come up, the National Board will be responsible for the report of it, which would lift a great load from the shoulders of the State Board.

The motion to adopt the report as a whole is adopted unanimously.

Dr. Holliday moves that the report be distributed to the National Government, the Congressmen and throughout the Western country, so as to give some degree of confidence, and to show that we are willing to accept their suggestions and are trying to offer such a system of quarantine as shall command the confidence of the whole Mississippi Valley. Motion adopted.

Dr. Richardson thanks the members for the courtesy shown, in asking outsiders to take part in the discussion.

Mr. Clark: If the general report is through, I desire to ask whether this Association will instruct a committee of its members to meet at some future time, within the next sixty days, the general freight agents or managers of the three different railroads running out of this city, in order to prepare a schedule of such articles as can be safely transported from New Orleans, to the interior anywhere, without those articles being the means of conveying either infectious or contagious diseases.

Dr. Holliday: In reference to Mr. Clark's views, I would further state, that we can strictly carry out the report that we have passed this evening and use that schedule for the guidance of the committee. We wish to establish confidence

throughout the whole Mississippi Valley. Let us adopt such a schedule and have it submitted to the meeting of the Sanitary Council of the Mississippi Valley. I would suggest, that the chair appoint a committee to confer with the railroad men to prepare that schedule, which schedule will be discussed and probably adopted at the next meeting of the Sanitary Council of the Mississippi Valley, which will be held in Evansville early in the spring, and with that endorsement and an early establishment of the rules here, a great many difficulties can be overcome.

Dr. Levy moved that a committee of five members be appointed. Adopted.

Dr. Holliday suggests that it be held as early as possible.

Dr. Davidson: The Chair will take occasion to appoint a committee with some care.

Mr. Whitney: Representing, as I do, the maritime interest, liable to be affected unfavorably by the rules of any quarantine that may be established, I wish here now to express my unqualified approval of the action taken by your association so far as it has gone, and wish further to express my commendation and pleasure that this association has met my friend, Mr. Clark, in the manner that they have, and believe it will be conducive of a great deal of good to the mercantile community in this city, and I endorse Mr. Clark's recommendations and solicitations with all my heart.

Dr. Davidson: The Chair will take occasion, in response to the remarks made in behalf of the Association, to express their deep sense of the kindness on the part of the delegates from those various bodies for having attended this meeting. Personally I feel, as I know every member of the Association does, that the meeting has been greatly strengthened by the advice and remarks which were made by the various gentlemen here present, and I feel sure the whole committee aimed, as far as the Association can express itself, to set before the public mind their intention to come to the assistance of the mercantile community about this subject of quarantine, not from any feeling or desire to dictate to the public at large, but that they might as professional men, having at heart the interest of the community, do all they can

as citizens and as professional men, to come to the aid of this community in bringing back a feeling of security. And also that they should resist the gross misrepresentations of our community, and particularly of the Board of Health, which endeavors now, as it has in the past, to discharge its duty in every way, and which, shortly after its reorganization, passed a resolution that every case of yellow fever occuring in New Orleans, should be promptly made known, and that they should communicate it to the surrounding States. So far as I am personally informed, I do not think that resolution has been willingly violated, and I should be sorry to think that any member of the Board of Health ever attempted to do so. Therefore the Board of Health, in common with the city of New Orleans, should in every way send forth to the public at large, throughout the whole country, their determination to do everything that is strictly honest and upright on this subject of quarantine, by making it known that there shall be no concealment whatever. That has been one of the purposes of this meeting, and I hope it may result, gentlemen, in our overthrowing every charge that may be brought against us of having purposely misrepresented the existence of yellow fever in our midst.

Dr. Salomon moved that the meeting adjourn.

Adjourned.

Need of a National Quarantine Against Yellow Fever.

By L. S. JOYNES, M. D.,

Emeritus Professor of Institutes of Medicine in the Medical College of Virginia, Secretary of the State Board of Health, &c., Richmond, Va.

[Read before the Medical Society of Virginia, October, 1878.]

During the season just closing, the country has witnessed the most widely diffused, and probably the most destructive, epidemic of yellow fever that has ever occurred within its borders, and the public mind has been more strongly aroused than ever before by the havoc of life, the ruin of business, the manifold suffering and distress occasioned by this pestilence, and earnestly ponders

the question whether more effective means cannot be devised and put into execution to prevent, or at least to limit, its ravages in the future. As one of the means of prevention, *quarantine* must always claim a large share of attention—indeed, a larger share than any other, because it is incontestably proved that the specific cause or germ of yellow fever *is portable:* that it may be conveyed from an infected to a healthy port in the closely confined air in the hold of a vessel—in her cargo, ballast, or bilge-water, sometimes in the personal effects of her passengers and crew; that the disease has in fact been frequently thus introduced into many of our seaports, both on the Atlantic and Gulf coasts; while there is also good reason to believe that its entrance has often been *prevented* by the barrier of quarantine.

In view of these considerations, it is plainly of the most vital consequence that the quarantine should be as effective as human wisdom, guided by the lights of experience, can make it—that it should be so planned and enforced as to afford the greatest possible amount of protection against the threatened danger, and, while accomplishing this paramount object, to cause the least interruption to commerce and human intercourse that may be consistent with safety.

It must be evident to any one who gives the subject due reflection, that no system of quarantine can be relied upon for general protection, unless it be *uniform*—that is to say, conducted on the same principles in all our seaports. For, while an effective quarantine at one point may prevent the entrance of infectious disease there, it may readily find admission, through the lack of quarantine, or a lax and careless quarantine, at another point. The state of things, and its probable results, would be much the same as in a besieged city, which should close and securely guard one gate, and leave another open, or feebly defended against the assaults of the enemy. When yellow fever has once gained a foothold in any important maritime city, no one can tell where it will stop. The experience of the present, as of some former epidemics, proves only too well, that under favoring circumstances of season and atmospheric

constitution, it may spread far and wide, as on the wings of the wind, along the lines of human intercourse, both by river and by rail. Thus a worthless quarantine, at a single port, may become a source of danger, and open an avenue of death to other communities throughout a wide extent of country.

As a matter of fact, is the quarantine which we institute against this national enemy uniform in plan and *equal* in *efficiency* at all our seaports? When we reflect that these seaports are governed by the laws of *nineteen different States*, fronting on or contiguous to the Atlantic and the Gulf of Mexico, it is not a matter of surprise that this question must be answered *in the negative.* A few citations will suffice to show that the diversities are marked and serious.

It might be expected that in the State of South Carolina, whose principal seaport has often been ravaged by yellow fever, and may be said to be in constant danger of it, the most perfect system of quarantine would be maintained. But listen to the testimony of the Committee on State Medicine and Public Hygiene of the South Carolina Medical Association, as given in a report to that body at its meeting of April, 1877: "On inquiry into the means and mode of carrying on quarantine in South Carolina, your committee have no hesitation in saying that the system now in operation in South Carolina is a farce, calculated from time to time to terminate in a tragedy." Again, "We can only say that the quarantine laws of South Carolina are designed to initiate a grand system, and the means provided for carrying them out are absurd in their feebleness and poverty." Further: "Your committee have no hesitation in saying that the present system in Charleston, and indeed at all the stations in South Carolina, is an absurd waste of money with no beneficial result, giving the feeling of security which quarantine, in reality, has attained for New York, but calculated, by this very reason, to do more harm than good." "At the present day, with the views held in relation to the transportation of disease, it is not the *length of time* that vessels are detained at quarantine, but *the manner in which they are treated there*, that constitutes the value of the system. Vessels must under-

go certain processes of *disinfection*, which should be thorough, or they are useless expenditures of money."

The author of the report from which these quotations are made (Dr. Manning Simons, of Charleston), in a note on the epidemic of yellow fever at Port Royal in 1877, submitted to the South Carolina Medical Association at its meetings of 1878, after commenting farther on the defects of the quarantine system, and noticing the great reduction of the appropriations for its maintenance, utters the emphatic declaration, "It is manifest to you, therefore, that quarantine in this State *exists only in name.*"

As it respects Georgia, the State Board of Health, in its report on the epidemic of yellow fever in Savannah, in 1876, speaks of "the admitted inefficiency of what has been called by sanitarians 'external hygiene' or 'quarantine,' as found on our coast." "The value of a properly regulated system of quarantine cannot be successfully controverted; the value of an enlightened and thorough system of internal sanitary regulations cannot be estimated. In both points of view, the facts developed in regard to the recent epidemic of yellow fever upon our coast, is a sad comment upon the wisdom and fidelity of both State and local authorities."

The same report contains a valuable paper by Dr. Ely McClellan, Surgeon U. S. A., who assisted in the investigation of the Savannah epidemic, in which the following language is used: "It is true that at all ports of entry, quarantine regulations are in force; but save at but two of the great American seaports, these quarantine regulations amount to absolutely nothing. The exceptions we make are in favor of the quarantines of the ports of New York and New Orleans, and of them only during the past few years, when these stations, passing into the hands of men of advanced understanding, the obsolete quarantine of detention has been replaced by the far more efficient quarantine of observation, which ensures the absolute disinfection of vessel and cargo, thus effectually destroying the germs of the disease." After giving the details of the system pursued at New Orleans and New York, the writer adds that a similar plan has been adopted at Galveston, with equally satisfactory results.

In a paper on quarantine, presented to the International Medical Congress of 1876, Dr. J. M. Woodworth, Surgeon-General of the U. S. Marine Hospital Service, gives a sample of quarantine as understood and enforced at Pensacola. On the 30th of May, 1874, on the arrival of yellow fever at quarantine, the City Council of Pensacola adopted an order that all vessels arriving at that port from infected ports should be compelled to remain in quarantine *until frost*, unless their commanders chose to leave the port; that no vessel should be allowed to take in or discharge cargo during the continuance of quarantine, and no person having been on board of such vessel should be allowed to visit the city. But no provision was made for the *cleansing and disinfection* of vessels from infected ports. The result was that, notwithstanding the employment of a guard to prevent it, communication was carried on by night between the infected vessels and quarantine station and the land, and finally the yellow fever spread to the city and the naval station near it—the quarantine, which consisted merely in detention of vessels "until frost," without any effort to destroy the fever germ which they conveyed, having proved a failure.

In contrast with this system, the writer places that pursued at New York, which is briefly as follows: When a vessel arrives from an infected port, if it be found that she is clean, and that no cases of disease have occurred during the passage, the passengers and crew are not detained beyond the time necessary for the *thorough airing and disinfection of their baggage and effects*—provided that the *period of incubation of the disease has passed during the voyage.* If cases of yellow fever have occurred during the passage, the passengers and crew are removed from the vessel; the sick, if any, placed in hospital, and the well detained in a comfortable, healthy place, until five or six days after the occurrence of the last case, when they are allowed to proceed to the city. Meantime, the vessel is at once subjected to a thorough airing and fumigation, and the cargo transferred to open lighters in the bay, by men kept for the purpose. During the unloading, the vessel is daily fumigated, and, when the transfer is completed, every available part is

cleansed with water, and, after a thorough disinfection and fumigation, the vessel is returned to commerce.

The results of this system are stated as follows: "During each of the past five years and more, a number of infected vessels arrived at the New York quarantine station. Many cases of yellow fever were treated in the quarantine hospital, but *in no instance did the disease spread to the city, or affect a single attendant on the sick.*" From another source, the information is derived that, during the year 1876, 363 vessels arrived at the New York quarantine station from ports at which yellow fever was prevalent, and that on 99 of these vessels there were cases of that disease. These were all treated in the quarantine hospital, and under the rigid system of disinfection, with brief detention, already described, no case of the fever arrived in the city from any vessel.

These citations are sufficient to prove the great lack of uniformity in the system of quarantine as conducted at our different seaports, and the necessity of greater uniformity, in the interests of the public health, as well as of commerce.

How is such uniformity to be attained? There is but one conceivable way, viz: *To place the whole system of quarantine under the direction and control of one central power—the general government.* As already intimated, it is idle to expect uniformity in plan or in efficiency under the laws of nineteen different States, each acting independently in this matter. And, if action be shifted from the State authorities to those of the twenty-five or thirty different maritime towns and cities which would be especially interested, the chance of uniformity, instead of being increased, would be lessened. The varying opinions, prejudices, traditions and interests—sometimes the poverty or parsimony—of these several localities will inevitably lead to serious differences in practical measures, even though these be everywhere prompted by the common idea of the public safety. *For unity of action, there must be unity of authority—a common head.*

And why should not quarantine be a matter of *national concern?* The danger is not local only, but general; for, as already remarked, when yellow fever once effects an entrance

at a weak point, no one can forsee how far it will extend its ravages. If I am told that the disease has often confined itself to the town into which it was first imported by shipping, I need only point to the experience of the present year to prove that such local limitation cannot be depended upon, and that communities a hundred or a thousand miles distant have cause to tremble whenever the pestilence finds a lodgment on our shores.

Nor is it the danger only that is national—the damage to the commercial and industrial interests of the country is equally so. Does any one suppose that, during the present season, it is only the Southwestern section of the Union that has suffered from the interruption of its trade and business, and thereby sustained heavy pecuniary loss? Far from it. The importer of New York, the manufacturer of New England, the grain-grower and pork-packer of the West, all feel the effects of the scourge which has desolated so large an extent of the Mississippi Valley, and are all looking anxiously for the termination of its career. The General Government itself will share the injury, in the inevitable diminution of its revenues. The evil, therefore, being national, the remedy—the measures of safety for the future—ought also to be national.

It should be borne in mind, also, that one of the most serious difficulties in the way of a complete and effective quarantine system is its *cost*. On many of the communities in the South most interested in the subject, this cost would bear heavily, and nothing would facilitate more the establishment of the best attainable system, with all its necessary appurtenances, than the transfer of the expense from the local to the national treasury. And would not this be just? Why should a single seaport, or a single State, be burdened with the entire cost of warding off a danger which menaces not it alone, but the country at large? Besides, the *revenues* derived from foreign commerce go into the general treasury. On it, therefore, in common justice, should rest the charge of combatting the dangers which that commerce may bring to our people.

Does any one urge *political* objections to what is here pro-

posed? There can surely be no doubt of the *constitutional power* of Congress over the subject. The Constitution of the United States grants to Congress the power "to regulate commerce with foreign nations, and among the several States, and with the Indian tribes." Congress, then, may regulate foreign commerce in such modes as may seem most expedient to encourage, enlarge and protect it; to increase its benefits and *lessen its evils and dangers*, as well to those engaged in it as to the country at large. In the exercise of this power, Congress appropriates money for the erection and maintenance of light-houses, of life-saving stations on the coast, of marine hospitals, and establishes rules for the admission of seamen into the latter; though the Constitution says not a word expressly about light-houses, life-saving stations, or marine hospitals. In like manner, although the Constitution makes no express mention of quarantine, the power of Congress to establish and control it is as plain as the power to do any of the other things just specified; for it would be merely the regulation of foreign commerce with the view of lessening the dangers to the country which would at times attend it, if carried on without proper regulations and restrictions. No one will question that Congress might prevent a ship from landing on our shores an armed force coming with the design of exciting revolution; or a troop of lions and tigers to be turned loose in the streets of New York or Charleston. Considerations equally clear and irresistible plead in favor of the power so to regulate and restrict commerce as to prevent the importation of a pestilence far more relentless and destructive than the wild beasts of the wilderness and the jungle.

That Congress has never heretofore exercised this power, proves nothing. It has declined to do so merely from motives of expediency. In like manner, Congress for a long time declined to exercise the power to fix the time for the election of its own members, but left this to the several States, for reasons of expediency. Quite recently, it has chosen to exercise the unquestioned power which had previously been waived, but not lost by the delay. So the power to establish and control

quarantine has not passed from Congress by lapse of time, because it has heretofore seen fit to allow States and municipal corporations to deal as they thought best with this important subject.

As to the question of expediency, I am not deterred by any apprehension of danger likely to result from this enlargement of the operations of the Federal Government—seeing that the new exercise of power will be for the safety and advantage of the entire country, more especially of the South; and it is not within the range of reasonable probability that it can ever be perverted to the purposes of injury and oppression. The country at large is too deeply interested in the subject to permit the supposition that the protection of our maritime cities against the inroads of pestilence can ever be made a sectional or party question. For one, I stand ready to applaud the exercise by the General Government of every power which it can lawfully claim, for the promotion of the public health and the protection of the lives of the people.

It is taken for granted that, in establishing and conducting a system of quarantine, the government would avail itself of every light of experience, and of the best judgment of medical men fully competent to deal intelligently with the subject. A commission of physicians—which might be composed partly of medical officers of the army and navy, and partly of physicians engaged in civil practice, but in every case of men familiar with the history and habitudes of yellow fever—could best settle the principles and the details of the system to be adopted.

In view of the foregoing considerations, the following resolutions are submitted to the judgment of the Society:

Resolved, That in the opinion of this Society, the system of quarantine against the introduction of disease (especially yellow fever) from foreign countries, in order to afford the highest degree of protection of which it is capable, ought to be conducted on substantially uniform principles at all our ports of entry.

Resolved, That in order to secure such uniformity, it seems indispensable that the quarantine system of the country shall be under the direction and control of a *common central authority*, viz: the General Government, instead of being made dependent upon a diverse legislation of nineteen different States, or the conflicting ordinances of a still greater number of cities and towns.

Resolved, That the Corresponding Secretary transmit a copy of these resolutions to the Governor of the Commonwealth, and to each of the senators and representatives of Virginia in Congress.

PROCEEDINGS OF THE ATTAKAPAS MEDICAL ASSOCIATION.

FOURTH MEETING.

FRANKLIN, December 7th, 1880.

The Association was called to order at 1 o'clock, P. M., President Dr. A. Maguire in the chair, and a quorum present.

The minutes of the last meeting were read and approved.

Dr. J. H. Wise, Dr. W. H. Gray and Dr. J. S. Gardner, of Morgan City; Dr. L. Richardson, of Cypremort; Dr. J. Hebert, of New Iberia; Dr. E. S. Barry and Dr. F. Guilbeau, of St. Landry, and Dr. J. P. Lynch, of St. Martin, presented their diplomas, to be referred to the committee on credentials.

The chairman of the committee on "a schedule of regular and uniform prices for the practice of medicine" reported and read letters, on that subject, from the secretaries of the several parish societies in the State. He also presented and recommended for approval the fee bill adopted by the Medical Association of West Feliciana.

The committee on credentials reported favorably on the verification of all the diplomas presented. The parties came forward and signed the Constitution and By-Laws. Dr. Wise, with a proxy, signed for Dr. W. H. Gray.

The West Feliciana Fee Bill was read and approved with slight amendments. It was unanimously understood that the fee bill be adopted for the present only, and subject to a recon-

sideration at the next regular meeting. The committee was discharged.

On a motion duly made, seconded, and also unanimously carried, it was

Resolved, That whenever the services of a physician are retained for a specified time, to attend to a case of labor, and that for some reason he is not called to give his attention to the case, the medical charges or fees in such cases be the same as if he had attended to the case.

A recess of fifteen minutes was taken.

The meeting was in due time called to order, the Vice-President, Dr. Geo. J. Colgin, in the chair.

The President, Dr. A. Maguire, delivered his annual address.

On motion of Dr. Smith, the thanks of the society were tendered Dr. Maguire for his able address, and it was ordered to have a copy of it sent to the New Orleans Medical and Surgical Journal, with the request to have it published.

After a second recess of fifteen minutes, business was resumed, President Dr. Maguire again in the chair.

On a motion duly made and seconded, Dr. C. M. Smith offered the following, viz:

Whereas, In the opinion of the Attakapas Medical Association, the establishment of the National Board of Health and Inspection Service by the Congress of the United States has been of great practical benefit and advantage to the country at large, in tracing the origin of epidemics, contagious and infectious diseases; in providing measures for the prevention of their spread over the country; in preventing panics and obviating the necessity for local quarantines in the States; in pointing out the modes by which sanitation may be secured; by keeping open for uninterrupted exchange the channels and highways of commerce, and in acting the part of a disinterested arbiter between Boards of Health of the States, and by its acts and recommendations adopted and carried into effect has gained the confidence and good will of the people; therefore, be it

Resolved, That the Attakapas Medical Association declares its confidence in the ability of the National Board of Health to protect the public from the importation and spread of infectious and contagious diseases; that we recognize its recommendations of sanitary measures as eminently wise, practical and effective, and its corps of medical experts and sanitary inspectors as meriting the hearty support and earnest approval of all good citizens. Be it also further

Resolved, That it would be an act of the greatest wisdom and of practical benefit to the whole country, its commerce and industries, for Congress to continue as a permanent organization, with enlarged powers, the presently constituted National Board of Health and Inspection Service.

Resolved, *also*, That we hereby express our confidence in the ability of the State Board of Health to take charge of all the matters affecting the public health within the limits of the State in Louisiana; that we fully recognize the ability and zeal of the members of that body, as displayed on all occasions in the discharge of their difficult and responsible duties, and that we can see no good reason why there should be any conflict of authority or interest between the State and National Boards of Health.

The preamble and resolutions were unanimously approved and carried.

Dr. Gates reported a remarkable case of gun-shot wound. Dr. T. Hebert, on a rare case of tumor of the bladder, in a young child. Dr. Smith reported a very interesting and strange case of tuberculosis.

The salutary effects of glycerine in affections of mucus membranes, and also in cases of obstinate constipation, received special attention, and it was unanimously acknowledged that this liquid possesses detergent properties, which fully recommend its application in cases of engorgements and inflammations of these membranes.

Dr. Allen, of Centreville, was introduced by Dr. Smith, and was regularly received as a member of the Association.

The Secretary was ordered to have the Constitution and By-Laws published, and to furnish a copy to every member.

The Chair appointed Dr. Guilbeau, of St. Landry; Dr. Lynch, of St. Martin; Dr. Richardson, of Iberia, and Dr. Wise, of St. Mary, as delegates to the meeting of the Louisiana State Medical Association, to be held in New Orleans on the last Wednesday in March, 1881.

There being no further business, the Society adjourned to meet in Morgan City on the first Thursday of May, 1881.

L. G. BLANCHET, M.D.,

Secretary.

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ORIGINAL COMMUNICATIONS.

A Consideration of the Objections urged by some Evolutionists against Sanitary Laws, Boards of Health, and the Stamping-out of certain Epidemic Diseases.*

By STANFORD E. CHAILLE, A. M., M. D.

Prof. Physiology and Path. Anat. Med. Department University, La.

Inasmuch as strenuous objections have been urged against the methods usually advocated for the prevention of contagious or spreading diseases, it has been deemed well to preface the discussion on this subject with a consideration of some of these objections, and, by request, I have undertaken this share of the discussion.

Human reason, whenever baffled in detecting the causes of natural phenomena, always hastens to assign to them a supernatural causation, and if these phenomena are injurious and irremediable, then reliance in supernatural remedies becomes as complete as in supernatural causes. If, with this consideration, we recall how little we know, notwithstanding enormous progress in recent times, of the causation and prevention of disease, we can better realize how dense was the ignorance of remoter periods, and can better comprehend why our ancestors

*From "The Proceedings of the American Public Health Association" as published by the New Orleans Democrat Printing Office.

were, during many centuries cursed with a blind faith in what the Rev. Saml. Haughton denounces as the "Will of God Theory" of disease. For more than a thousand years our Christian forefathers, when afflicted by disease, above all by epidemics, enjoyed no faith in measures for relief other than miraculous interventions and special dispensations of Providence; prayers, holy pilgrimages, miracle-cure, shrine-cure and the relics of martyrs and saints were the most trusted and often the only remedies in their pharmacopæia. This barbarous superstition was so universally and so long maintained, that striking relics of its persistence are still to be found in every country. Even in 1878 in the United States, several governors promulgated pious proclamations to arrest the spread of yellow fever, which, in spite thereof, continued its ravages until checked by such usual and natural causes, as diminished intercourse and lowered temperature. But in order to mark the contrast between past and present, recall the fact that our ancestors placed all reliance in God and none in themselves, thus strangling the inauguration of sanitary measures, while in 1878, the continued faith in God favored rather than prevented the humane North from forwarding millions of dollars to relieve the stricken South: and this faith did not prevent the inauguration of a National Board of Health, nor the cleansing of Memphis, nor the formation of the New Orleans Auxiliary Sanitary Association, nor the adoption of many other worldly measures for better protection. So great is the contrast, as respects the prevention of disease, between the inert fatalism of the past and the active intervention of the present, that every sanitarian has been confidently indulging the hope that mankind was now on the border land of a future, wherein all men would fully realize that man holds his earthly destiny in his own hands, and that diseases can be, in greater part, eradicated by a wise but active subserviency to nature's laws. This well-founded hope has seemed to justify the sanitarian in entreating his fellow-citizens to cease maligning God by attributing to Him evils due solely to their own ignorance and negligence; in teaching the people and their rulers that the price of public health, as of liberty, is eternal vigilance; in urg-

ing the vigorous application of all prophylactic knowledge yet acquired; and in spurning hopeless inaction in all cases except in *those only* wherein action would surely prove injurious, for, even when success is doubtful, experimental efforts are the surest means by which to gain the knowledge which will eventually bring success.

Is the hope which has blossomed over the grave of the fatalism of the past destined to be blighted by the new and growing faith in the law of evolution—that grand law which constitutes the most important discovery of the nineteenth century, stimulates every department of knowledge and teaches a mightier conception of the great Creator? It is not doubted that sanitarians are, for the most part, evolutionists, at least to the extent of the belief that gradual development, thereby the progress of all things, including man himself, is the law of universal nature; nor is it doubted that all will concede that Herbert Spencer is the ablest apostle of the doctrine of evolution, that his views, always suggestive, are entitled to the serious consideration of intelligent men, and that the opinion of a minority, even of one man, against the world's opinion, may be now, as it often has been heretofore, the expression of the truth. Admitting these premises, and that sanitarians love truth above all things, it follows that they should consider well the views, so antagonistic to their own, of the apostle of evolution. Thus knowledge may be gained to arm ourselves with new weapons to conquer new foes and to conduct with greater success our incessant warfare against disease.

Spencer, in his volume on "Social Statics," vigorously opposes the promotion of sanitation by the enactment of any laws, whether by a nation, by a State, or by a municipality. He denounces all boards of health as veritable impediments to sanitary progress, and he leaves little doubt that he considers all those who do not concur with his views as merely "amiable people" whose weak-minded sympathy strives after measures which, in his opinion, are "very injudicious and in the end even cruel;" as "flippant red-tapists," striving to stick "a patch upon nature;" as "meddlers" with nature's all-sufficient laws; as "self-appointed nurses to the universe;" as "creation-menders," and finally as "spurious philanthropists."

Inasmuch as these contemptuous denunciations not only apply to the most illustrious statesmen and physicians of modern times as well as to the members of this association, but also fail to indicate the possession by Spencer of the imperturbable dignity and unimpassioned judgment which should characterize a great philosopher, it would accord with human infirmity if sanitarians received these denunciations with indignant antagonism. However, reason and love of truth should triumph over the natural prejudice thus aroused, and patiently give ear to the arguments by which these denunciations are justified.

Insisting that a social organism is no more than a voluntary union of men exclusively for mutual protection, Spencer establishes his first and his sole principle for this protection and for the government of this voluntary union, and he terms his "first principle"—"the law of equal freedom." He defines and explains this law as follows: Every man should have perfect freedom to do "all that his faculties naturally impel him to do," "all that he wills, provided he infringes not the equal freedom of any other man," and in order that there may be no aggression on any man's alienable right to do "as he wills," it is deemed imperative that "the duty of the State is to protect—to enforce the law of equal freedom—to maintain men's rights, or, as we commonly express it, to administer justice," and that "the State ought not to do anything but protect." It is insisted that the plea of expediency, however urgent, can never justify the State in departing from its sole duty of protecting the equal freedom of every unit of the social organism. Since life, property and liberty are indispensable to equal freedom, they are proper subjects for State protection; but health should not be protected by the State, for the following various reasons:

The protection of a man's health is a right which belongs and a duty which he owes to himself, and this duty cannot be assumed by the State without infringing upon the law of equal freedom, without aggressing upon a private right, and without retarding man's adaption to the conditions imposed by nature

on his existence. The development of self-helpfulness is a supreme requirement for permanent progress, and any artificial performance by the State of the work which each person should do for himself must check the development of self-helpfulness; ignorance should not be put by art on a par with wisdom, unless it be desired to check the growth of wisdom. Admitting that health should be protected by law, it becomes impossible to see how far this interference should go, and necessary to admit that the State should regulate the quality, quantity and proper time for the use of the food, drink, baths, clothes, exercise and sleep of every person. Since enormous sanitary progress has been made during recent centuries by natural causes, such as by great progress in those arts of civilization and in that knowledge which promotes health; and since this natural progress has been accomplished without artificial sanitary administration, this progress should not be tampered with by the State, but should be left, as heretofore, to that provison of nature which causes it to respond to every new demand—to "the inherent adjustment of things." Experience proves that sanitary laws and officers fail to accomplish their purpose, that there is always some inevitable IF to defeat the hoped-for object of their existence; and finally, even if they could attain their purpose, sanitary success thus gained would retard the development of some other thing more essential to human progress—such as the "self-helping character" indispensable to the permanent welfare of the social organism.

For the reasons now stated, Spencer teaches, in his "Social Statics," that all sanitary laws and officials are artificial interferences with, and actual impediments to, the natural evolution of sanitary progress, the development of which cannot, in his opinion, be permanently promoted by any methods other than those which promote the growth and dissemination of sanitary knowledge among the people; by such methods as preaching, lecturing, teaching and publishing this knowledge, until it becomes so universal that every man will voluntarily do for himself, and unite with others to do for an actively obedient community all possible things requisite to protect private

and public health. Hence, this association met Spencer's full approval until it used its influence to establish Boards of Health, and to secure other sanitary laws: and the New Orleans Auxiliary Sanitary Association, actively engaged in sanitary improvements, would be his beau ideal of the great desideratum for sanitary progress, provided that this association would refuse to be, what its title avows it to be, auxiliary to the sanitary laws and officials of this city and State. In fine, Spencer has entire faith in the development of sanitation by individual intelligence, and by the union of intelligent citizens into such voluntary associations or corporations as have so notably developed marine transportation, railroads, telegraphs, and numerous other branches of commerce, manufactures, agriculture, etc.: and he has no faith whatever in such legislative corporations as boards of health, or in any such laws and officers, as legislators must, in violation of the law of equal freedom, usurp the right to establish.

As Spencer has marshalled against sanitary supervision by the State all the opposing arguments since used by others, no just objection can be urged if the "*argumentum ad hominem*" is chiefly employed in discussing his views. Hence there will be no hesitation in summoning Spencer to bear witness against as well as in favor of his own views, and in case these are thus refuted it will be claimed that neither the law of evolution nor any law of equal freedom now practicable prove the conclusions taught by him. Therefore, attention is now solicited to six considerations adverse to Spencer's conclusions, and derived from the same book, "Social Statics," from which has been collected everything already stated in favor of his conclusions:

First—Spencer's consideration of sanitary supervision by the State constitutes only one chapter and a subordinate fraction of a vast, coherent and designedly perfect system of sociology. With his usual candor, he emphasizes the fact that the very same or analogous objections apply with equal force to many other subjects which are commonly but most erroneously deemed proper for State interference. Among the

subjects denounced, equally with sanitary supervision, are the following: Governmental religious establishments, colonization, regulation of commerce, national currency, postal service, public education, poor-laws, and public works of all kinds, such as light-houses, harbors of refuge, canals, roads, railroads, drainage, sewerage, paving and lighting of streets, jetties, levees, etc., all of which should be left to private enterprise. In addition, Spencer denounces the taxation of any individuals by the State for its administration of the justice due to him without special charge, as grossly unjust; the appropriation to individuals of the soil which, by nature, belongs equally to all men, as a "usurpation and gigantic injustice;" slavery as a "barbarous outrage;" war as a fearful wrong; the coercion of wives by husbands and of children by parents as outrages on the law of equal freedom; anti-democratic governments as unjustifiable: the right of majorities to rule minorities as a "political superstition," and finally, coercive government of any kind as immoral. These facts prove that Spencer denounces the National and every State constitution in the United States, as well as every government ever devised by man; and that he concedes that sanitarians have as much right to demand from the State the protection of health as to demand State interference for the regulation of commerce, the promotion of public education, the provision of asylums, hospitals and of other aid for the indigent, the establishment of public works, etc. Now, since *sanitarians* are subjected to conditions of existence which force *them* to submit to these Spencerian outrages, it seems evident that these unfavorable conditions justify them in demanding from the State the additional, but no greater, outrage of protecting the public health. It is something to the sanitarian, who is an evolutionist, thus to gain assurance that sanitarians are at least no worse than all their other fellow-citizens, and that the conditions of their existence excuse their alleged meddlesome interference with nature, their "sickly sentimentalism" and their spurious philanthropy.

SECOND—The unanimity and persistency of all nations in constantly violating Spencer's perfect "law of equal freedom"

conclusively prove that these violations are requirements of nature indispensable to progress, and, therefore, in accord, at least, with the law of evolution; and that his fierce denunciations of these violations find justification in a contemplated perfect social organism in the future, and not in the contemplation of the past and present conditions of man's existence. "Social Statics" abounds in lessons, some of which will be cited, proving the correctness of these conclusions.

Spencer says: "The manifold evils which have filled the world for these thousands of years, the murders, enslavings and robberies, the tyrannies of rulers, the oppressions of class, the persecutions of sect and party, the multiform embodiments of selfishness in unjust laws, barbarous customs, exclusive manners and the like, are simply instances of the disastrous working of *the original* and *once needful* constitution, now that mankind has grown into conditions for which it is not fitted, are nothing but symptoms of the suffering attendant upon the adaptation of humanity to its new circumstances." All these outrages against the perfect law of equal freedom were necessary, and were simply illustrations of the modus operandi of the law of evolution, for, says Spencer, "the aboriginal man *must* pursue his outrageous course in order to develope into the perfect ultimate man." "The course of civilization could not possibly have been other than it has been." "No other series of changes than that which has taken place could have taken place," and as long as, but no longer than, the injustice of violations of the law of equal freedom is not perceived, they "are *on the whole beneficial.*" Now, is it possible to avoid the suspicion that—since the conditions of existence of our barbarous ancestors caused religious persecution, brutal conquest, slavery and despotism to be "on the whole beneficial"—the unfavorable conditions of existence of the present most imperfect man may cause such lesser outrages as national education, poor laws, public works and even sanitary supervision to prove also "on the whole beneficial?" Spencer leaves no doubt about the correctness of this suspicion.

He fiercely denounces war, yet insists that it still is "often

indispensable," because only by this great wrong can the State protect the people from greater wrongs. He teaches that the regimen suitable for the healthy may be very dangerous to the sick; that his perfect law is incongruous with imperfect men; that while it is the only safe guide, it cannot be fulfilled by them; that the worse the condition of society, the more visionary this law must appear to be; that in considering the conditions man is now subjected to, his *existing* but imperfect institutions are "*the least wrong* institutions now possible;" that these should be perpetuated as long as they can be, since they will continue to prove beneficial as long as men fail to appreciate and do willingly submit to their imperfections, and until they have learned to supersede them with more perfect institutions; that men still require legal shackles and rulers to impose them; that "like other organisms, the social organism has to pass, in the course of its development, through temporary forms in which sundry of its functions are fulfilled by appliances destined to disappear as fast as the ultimate appliances become efficient:" and finally, that men may be well assured that to hasten social development nature's greatest need is for sincere belief, healthy faith, fidelity to conscience, wherever this may lead.

Is it not now manifest that Spencer's denunciation of sanitary supervision by the State flows from the violation thereby of his perfect but admittedly impracticable and visionary law of equal freedom? And is it not manifest that, even from a Spencerian standpoint, this supervision is justifiable, for this if for no other reason, that the continuous development of sanitary laws and boards of health among civilized nations during the past thirty years, prove that these are destined to be forms and appliances (even if temporary) for the fulfillment of a most important function of the social organism—forms and appliances through which it "has to pass in the course of its development?"

Throughout "Social Statics" it is made evident that Spencer hurls his shafts of satire and ridicule against existing institutions from the ideal platform of his perfect law of equal freedom, and from the, at present, inaccessible heights of the

Spencerian millennium, wherein the ultimate man, perfected product of evolution, is to play the role of those saints, who, according to the Book of Revelations, are yet to reign on earth. From this standpoint many existing institutions are absolutely wrong, while from the standpoint of existing conditions they are relatively right, and are emphasized as "on the whole beneficial."

While the two previous general considerations suffice, in my opinion, to counterbalance in large, if not in full, measure Spencer's arguments against sanitary supervision by the State, and fully to prove that this is not at variance with the law of evolution, there are yet four special considerations deserving notice.

THIRD—Spencer urges that "the duty of the State to protect the health of its subjects cannot be established," because of "the impossibility of saying how far the alleged duty shall be carried out;" and he adds the following inquiry and response thereto: "Where, between a universal supervision of private conduct and no supervision at all, lies the boundary up to which supervision is a duty? To which question no answer can be given." It will surprise no one that Spencer could not answer this question when informed that he entirely failed throughout his book to make any distinction between public and private hygiene, and that every one of his numerous and unfavorably criticised examples was drawn exclusively from the latter (see pp. 315, 418 of Social Statics). In spite of his inability to answer, his own perfect law of equal freedom furnishes the answer and establishes just "how far the alleged duty shall be carried out." For, is it not true that every man should have freedom to secure as much benefit for and to inflict as much injury on his own health as he wills, "provided that he infringes not the equal freedom of any other man" to secure for his health as much benefit and as little injury as he wills? Sanitarians demand this and nothing more from the State.

Laws protecting health, the *most valuable possession* of a freeman, are as justifiable as are the laws which Spencer insists the State should enact to protect his property, and it

is as possible in the one case as in the other to define "the boundary up to which supervision [of health by the State] is a duty." The sanitarian insists, in fact, that a man's health is property, and more valuable than his purse; let him waste either if *he* wills, but he shall not waste either in injuring others against *their* will. Further, since it is the duty of specially competent citizens to suggest remedies for violations of the rights of property, of legislators to provide means to apply these remedies, and of special officers to administer them; it is equally the duty of sanitary experts to suggest remedies for violations of every man's right to health, of legislators to provide means to apply these remedies, and of boards of health or other special officers to execute the measure provided. Admitting that social progress primarily requires from the State protection of life from violence, of property and of liberty, it is confidently claimed that the next important step for further progress, due by the State to every citizen, is the protection of his life from disease inflicted against his will by others; and that the duty of the State to furnish this protection is taught by the very same arguments used, as strongly by Spencer as by every one else, in behalf of the protection of life, liberty and property.

FOURTH—Spencer's arguments against sanitary supervision are invalidated not only by his failure to mark the difference between public and private hygiene, but also by his failure to consider whether sanitary laws and boards of health might not, and did not, hasten instead of delay the acquisition by the people of that sanitary knowledge which he insists is the only desideratum for promoting sanitary progress. It is deemed too manifest to require proofs in detail, that the experience of civilized nations during the past thirty years, has conclusively demonstrated that sanitary laws and boards of health have promoted the general acquisition of sanitary knowledge, and have thereby tended to develop that very self-helpfulness which Spencer hastily declared would be greatly interfered with by the adoption of such artificial measures. These measures have thus far borne well that test, which an evolutionist, who is at the same time a famous philosopher and historian, teaches

should be applied to all political institutions, namely, that they "should tend to the improvement and organization of national intellect."

FIFTH—Spencer's arguments are further, and, in my opinion, fatally invalidated by the following notable admissions. He writes: "That it comes within the proper sphere of government to repress *nuisances, is evident.* He who contaminates the atmosphere breathed by his neighbor, is infringing his neighbor's rights. Men having equal claims to the free use of the elements—having faculties which need this free use of the elements for their due exercise, and having that exercise more or less limited by whatever makes the elements more or less unusable, are obviously trespassed against by any one who unnecessarily vitiates the elements and renders them detrimental to the senses; and in the discharge of its functions as protector a government is *obviously* called upon to afford redress to those so trespassed against."

Inasmuch as these admissions concede to sanitarians their essential demands, it is incomprehensible to me that Spencer should indulge in denunciations which he launches against all sanitary laws, against boards of health, and against sanitarians. For, what citizens, unless sanitary experts, can determine what are, and can devise the remedies which should be applied for contaminations detrimental to health, of the air and of the "elements" (which are presumably water, soil, and food, as well as air); by what mechanism except that of the law can these detrimental contaminations be defined and means for their rectification be provided; and by what officers, other than sanitary experts, can these duties be efficiently executed? It is admitted that "nuisances" should be repressed by the State. What are nuisances? Anything producing damage or even annoyance. What things damage health? The progress of sanitary science continually increases their number, and also the number and efficiency of the remedies therefor; hence sanitary laws must be as constantly increased by the State to repress these nuisances. This forces the State, under the present conditions of man's existence, either to organize a sanitary adminstration or to refrain from using the most efficient means

to repress sanitary nuisances—a governmental duty which Spencer declares is "evident," and "obvious." To insist that it is the duty of the State to repress trespasses on a man's health, and yet insist that the State should shift the discharge of this duty upon private citizens, whether individually or collectively, is a *reductio ad absurdum*. Even the fiercest sanitary enthusiast demands no more from the State than that it should wisely determine what are sanitary nuisances, should protect therefrom all persons who appeal for redress, and should provide the most efficient means to accomplish these ends.

SIXTH—An enthusiastic evolutionist as well as sanitarian, I was tempted to a closer study of "Social Statics" by the denunciations therein heaped, by the most famous evolutionist, upon the doctrines advocated by the most famous sanitarians. Honoring the author exceedingly, I, on reaching the views and conclusions now stated, was greatly shocked that a philosopher so deservedly eminent should have treated public hygiene with so little dignity and so little wisdom. Anxious to preserve my respect, I was induced to exhaust my search for excuses in his behalf, and was thus finally prompted to do that which ought to have been done in the first place, namely, read the introduction and prefaces to his book (Appleton's New York edition, 1872). To my great gratification, so far as Spencer was concerned, and to my great indignation so far as those were concerned who have abused his authority for the purpose of discouraging sanitarians, I found that Spencer wrote his book in 1850, when only a newspaper employee; that even at that date he apologized for "the manifestion of feeling," and for the sacrifices of "conventional dignity" displayed in this book; and that, as early as 1864, he warned the readers of this book that, while he continued to hold the same doctrines, "in their general character," yet that "in restating them he would *bring into greater prominence the transitional nature of all political institutions* and the *consequent relative goodness of some arrangements*, which have no claims to absolute goodness." It is thus made evident that I have done Spencer great injustice in employing the present tense to indicate very old views, advocated as long ago as 1850, and that those who quote these views to bring

State sanitation and sanitarians into discredit, are guilty of the grave misdemeanor of misrepresentation. The facts are that Spencer advocted certain immature views at the very dawn of his philosophical career in 1850, that he had greatly modified these views in 1864, and that no man is authorized to state what are his present views respecting sanitation,—nor will he be until the completion of the three volumes on the "Principles of Sociology"— the work designed to crown his philosophical labors, and wisely postponed for his maturest consideration.

It is believed that the considerations now concluded sufficiently prove that the law of evolution is not contravened by sanitary administration; that this fulfills that law by providing a necessary, even if transitional, institution through which the social organism must pass in its progress to a more perfect development; that sanitary administration, if justifiable at all from the Spencerian standpoint, must be most justifiable when the product of universal suffrage, as in the United States; and finally, that if sanitary administration violates even the perfect law of equal freedom, it does not violate any such equal freedom as is practicable under man's existing conditions. It is then an eminently "healthy faith" which inspires your labors and prompts you to demand from the State its support of public hygiene and its protection, above all, from those epidemic diseases which have repeatedly shaken States to their foundation, paralyzing the discharge of their pre-eminent duty to protect life, property and liberty.

In concluding this defense from the evolutionist's standpoint of sanitary laws, of boards of health and of so-called sanitary "pseudo-philanthropists" against the assaults of pseudo-evolutionists, it is proper to remind you that their defense, from the standpoint ot the law, was most ably presented in 1875, by Dorman B. Eaton, LL. D., and constitutes a part of the second volume of your transactions.

Your attention is now called to some views of Dr. H. M. Lyman,* who no more hesitates than I do to avow himself a disciple of Spencer—views concerning the best methods for ar-

*See the New York Medical Record of June 26, September 4 and November 6 1880, and pp. 88–102, vol. 4 (1877), Trans. Am. Public Health Association.

resting the ravages of certain contagious or spreading diseases, and deserving your attention, chiefly because probably antagonistic to your own views. He writes for the special benefit of "ordinary, average sanitarians," (such as we profess to be), and of the sanitary "busy-bodies of our day," and he enforces the following lessons:

No attempts should ever be made to stamp out "endemo-epidemic," or any "endemic virulent diseases," whose primitive causes are out of our reach—for instance, such diseases as are measles and scarlet fever in the United States—"the proper course" to pursue "is that which will favor their widest possible prevalence." By the greatest possible diffusion and the most unrestricted prevalence of these diseases their viri are attenuated,—the epidemics caused thereby become more controllable,—inestimable, though unappreciated, advantages accrue to the community "from continuous personal and hereditary adjustment" to the causes of such diseases; the number of persons enabled successfully to resist these diseases by "hereditary tolerance" is most advantageously increased, and "the feeble offspring of the community," whose death is necessary for the preservation of the vigor of the human race, are most advantageously weeded out. "Any other course causes increased susceptibility, uncontrollable epidemics" and vitiation of the human race.

In further explanation of these views it is taught that, when the causes of disease cannot be removed, then we must learn how to adjust ourselves to its presence; that in the interests of universal humanity it is the highest beneficence which "singles out the low spirited, the intemperate and the debilitated as the victims of an epidemic;" that scarlet fever, measles, etc., are, as is plain to "those who take a comprehensive survey of the subject," "diminished by their spread in the community;" and that if they could be stamped out for a few generations, they would "sally forth from the wilderness" and more than decimate our descendants; that "man can neither create nor destroy force," therefore (!) if he "stamps out one disease another will inevitably spring up in its place"—for instance, if he "diminish the prevalence of scarlatina, diphtheria will

occupy the field;" that "heredity and natural selection" have "a modifying influence over the spread of zymotic diseases," "evolving a population more tolerant of the diseases with which it is continually acquainted than a population for the first time exposed to the influence of the same diseases;" and, finally, that, to appreciate these startling views, sanitarians have great need for "breadth of view," and to be "educated up to the broad level of science and philosophy"—especially of Darwinian science and Spencerian philosophy!

It is regretted that numerous vague statements and ambiguous expressions should have been so used in the presentation of these views as to hamper the satisfactory discussion of some of them. It would not be difficult to show the ambiguous usage, either from common or from the writer's abuse, of the most important expressions in even the chief propositions, such as "endemic," "primitive cause," "attenuation of viri," and "hereditary tolerance." Although logic turns its back on ambiguity, an attempt will none the less be made to consider fairly the two main propositions, and if any misrepresentation results, it will be due to one of two causes, either that these propositions are so presented that they are incomprehensible, or that their present critic has not been "educated up to the broad level of science and philosophy" necessary to comprehend them. For either of these deficiencies, philosophy counsels patience and pardon.

These two main propositions are: First, that the poisons of measles, scarlet fever, etc., are attenuated by their diffusion and prevalence, and that the greater "the pandemicity and continuity" of such virulent diseases, the less do their evils become. And, second, that through heredity, "elaborated during successive generations," a "hereditary tolerance" of, or "hereditary resistance" to these diseases is evolved, constituting a "most valuable and universal" method for adjusting mankind to these diseases—a method which yields most beneficent results, while any measures interfering with the spread of endemic virulent diseases yield most injurious results.

I. The first question for discussion then is this: Does the pandemic diffusion and continuous prevalence of measles,

etc., attenuate their poisons, and thereby diminish their evil results?

Two arguments are urged in the affirmative, namely: That since every epidemic is eventually marked by a diminishing mortality and by final extinction, therefore (!) these results are due to attenuation of these epidemic poisons, and prove that this alleged attenuation is a reality; and that, since the prevalence of small pox has been diminished by the diffusion of vaccine virus, which is alleged to be attenuated small-pox virus, therefore (!) the poisons of all endemic virulent diseases would be attenuated by their diffusion and their prevalence be thereby diminished, as with small-pox. Some of the arguments in the negative are as follows:

"There is not one known thing possessing the power of reproducing itself, which is not increased by its diffusion. If the accepted view be correct that the poisons of measles, etc., reproduce themselves, then these poisons cannot be attenuated nor their evils be diminished by their diffusion any more than hydrophobia, gonorrhœa, favus, trichina or anthrax can be diminished by their spread. If said poisons were like a fixed quantity of arsenic, strychnine or snake venom, then they could be attenuated by their diffusion; but in this case the burthen of proof is on Dr. Lyman, and it becomes his primary duty to prove that the world of science is at fault in its view, before he can have the slightest authority for disparaging sanitarians because they decline the attempt to attenuate reproductive poisons by planting them as widely and persistently as possible.

The assumption that the diminishing mortality and final extinction of epidemics are due to the attenuation of their exciting poisons is no more true than that the diminishing flame of a charred fagot is due to the attenuated oxidation; than that a diminishing fermentation is due to the attenuation of its ferment; than that the diminishing leaves of autumn are due to an attenuation of their producing seeds; or than that a diminishing number of fly-specks is due to an attenuation of flies. The spreading of reproductive

poisons no more diminishes their intensity, or the number of persons infected, than the spreading of fire, or of ferments, or of seeds, or of animal organisms diminish their effects. If these poisons cause non-recurrent disease, then, of course, very manifest and well-known results ensue—such as the weeding out of the susceptible and the extinction of the disease until such time as may be necessary to reintroduce a susceptible population, and to revive or to reintroduce the poison. It is not understood that these important results of a manifest cause are involved in the present discussion, except in so far as they may be attributed, as they appear to have been, to other causes.

The second argument, when reinforced by universally admitted facts, justifies the following syllogistic presentation of it: The vaccine poison is attenuated small-pox poison, but instead of causing, it arrests a spreading disease, namely, small-pox—therefore, this attenuated poison should be as widely diffused as possible; *hence*, the measles poison, which is not attenuated and does not arrest, but, in fact, causes a spreading disease, namely, measles, should be as widely diffused as possible, and *thereby* be attenuated. Yet, shades of Whewell and of Mills! the author of this inconsequential argument complains that sanitarians are *illogical!* What, pray, does it matter to the practical sanitarian whether vaccine-virus is or is not attenuated small-pox virus, when the sole important fact to him is that by artificially diffusing the vaccine disease he forthwith arrests small-pox, while by diffusing measles he as evidently does not forthwith arrest measles? The inference drawn—from comparing the vaccine poison, even if it should be attenuated small-pox poison, and the small-pox poison itself, with the measles poison in *puris naturalibus*, and this very same poison—is nothing more than the triumph of scientific fancy over common sense.

Further, if it be best to diffuse the disease-poisons, whose causes we do not know, how is it that it certainly is not best to diffuse the disease-poisons whose causes we do know? Who would advocate the feasibility of diminishing hydrophobia by diffusing mad-dogs, or trichinosis by diffusing diseased hogs, or itch by diffusing the sarcoptes scabei, or typhoid fever by

diffusing its fæcal discharges? Still further, if the pandemic diffusion and continuous prevalence of endemic virulent diseases attenute their viri, then Cuba ought now, after more than a century of the increasing diffusion and continuous prevalence of yellow fever, to witness that which it very certainly does not witness, some marked evidence of the attenuation of the poison of this disease.

The views advocated respecting the attenuation of certain viri by their diffusion, and the consequent diminution of their evils are based on such groundless assumptions that it is even difficult to imagine how such views could have been *conceived at all.* Some assistance in solving this problem is gained by the knowledge that Dr. Lyman holds the two following assumptions also as truths: He teaches that typhoid, typhus fever and "their congeners," also relapsing fever, anthrax, cholera and yellow fever, are not only contagious, but also can originate spontaneously; for instance, that the poison of yellow fever is "a miasm, formed by the decomposition of excreta in contact with organic debris in the presence of moisture at an elevated temperature of the atmosphere;" so that this disease is liable to originate in the Southern United States at any time "when the conditions of heat and moisture and human filth concur in due proportion."* How silly for the "ordinary average sanitarian" to attack these numerous hydras, before which super-human Hercules, the boss sanitarian, would have quailed! He further teaches that since man can neither create nor destroy force, therefore (!) if he succeeded in stamping out one disease another would spring up in its place, as diptheria in place of scarlatina; thereby implying that there is a special disease-force, not correlated with other forces, and that the forces on which depend the growth of diseases, say potato-rot and scarlet fever, cannot be transformed into forces which will swell the pulp of a healthy potato, and redden the glow on an infant's cheek. Again, if there be a disease-force, and this exist in fixed quantity, why attempt the fruitless task of destroying it; why not diffuse and

*See pp. 88 102, Trans American Public Health Association, vol. IV. It also deserves notice that in 1877, Dr. Lyman found Pasteur guilty, respecting the bacillus anthracis, of "exceedingly audacious assumption," while in 1880 he concludes that Pasteur's researches on the germ of chicken-cholera "are fraught with an importance not yet suspected by the average unscientific sanitarian."

so attenuate it that while every man will get a little no man can exceed his share, and if a man's due share of the universal dose weeds him out, then all the better for the vigor of the race and for universal humanity? Is it credible that such incredible and discredited assumptions, as are these, come down to sanitarians from the "broad level of science and philosophy?"

The second question for decision is the following: Does heredity elaborate, during successive generations, a tolerance of or resistance to endemic virulent diseases, and does heredity effect this to such extent as to constitute this resistance a "most valuable defense" against such diseases, so valuable that their pandemicity and continuity should be encouraged in order that universal humanity may more promptly acquire this unestimated yet inestimable power of resisting them? The advocate of this view assumes that an affirmative answer is unquestionably true, needs not the rigid proofs scientists demand, and hence is afflicted with none of their doubts.

Among others, Prichard, Elam, Ribot, Spencer, Darwin and Holland have exhausted their own experience and all published reords in their search for examples illustrative of the multiform iinfluences of heredity, yet not one of these authors (while presenting much evidence in favor of an hereditary tendency to certain diseases) has presented any proofs of hereditary resistance to disease, and not one of them justifies the dogmatic claim insisted on by Dr. Lyman. Immunity from disease (especially from the non-recurring diseases now in question) must be gained by the mutilation or alteration of some physiological structure; and the accidental condition thus acquired by parents must be transmitted to their descendants, in order that these should acquire any hereditary resistance or immunity. Now, what are the general facts thus far secured by science on this subject?

Prichard teaches that "nothing seems to hold true more generally than that *all acquired* conditions of body, whether produced by art or accident, *end with the life* of the individual in whom they are produced;" and he illustrates this, by the non-heredity of the mutilations and alterations which some savages—for instance the Flat-head Indians—have practiced

during many successive generations, by the non-heredity of the Chinese foot arrested in its development, and by the non-heredity of the circumcised prepuce practiced by the Jews for several thousand years. Elam teaches that "every formation of body, internal or external, every deformity or deficiency from disease or accident, every habit and every aptitude are all liable to be or *may be* transmitted to the offspring. In case of *accidental* defects and modifications of the specific type, *the offspring usually do not inherit them*, but return to the normal type." Ribot teaches "acquired modifications can certainly be transmitted," but "facts seem to show that these deviations, from the type tend to return to the normal state, and that *the law is that accidental states are not perpetuated*, but that, after subsisting for a few generations *at longest*, they first grow fainter and then disappear." While Spencer, by his omission to make any claims for any hereditary resistance to disease, implies that he found no good evidence therefor, Darwin teaches that "with respect to the inheritance of structures mutilated by injuries or altered by disease, it is difficult to come to any definite conclusion;" that is to say, that if there be any conclusive proofs of hereditary resistance to disease, Darwin could not find them, and he indicates as plainly as do all other authorities that if any such resistance is ever developed it is developed only occasionally, and not habitually. Dr. Lyman's exorbitant demand on heredity was suggested, with due moderation and commendably scientific modesty, in 1856 (probably even as early as 1839) by Sir Henry Holland, who then said that evidence warrants the *opinion* "that repetition of a given disorder through successive generations *may* alter the liability to receive it under its most severe forms."

These various quotations suffice to prove, that if hereditary resistance to disease exists at all, this resistance is manifested so obscurely, slightly and slowly that science does not yet justify any one in assuming that it is a universal, all-pervasive and most valuable defense against disease under the ordinary conditions of man's existence.

In support of the demand made on heredity, the diminished severity and prevalence of syphilis throughout the civilized

world, of measles in the United States, of malaria in Africa, of yellow fever in Cuba, and of cholera in India are cited. Not one of these instances can stand the test of criticism, and since this would prove tedious, and also, as is believed, unnecessary, it will suffice to suggest one general comment. If these diseases have been diminished by heredity, and if their spread ought to be encouraged in order to secure from them the blessings of weeding out those unfit to survive and of securing for the future a more vigorous race—then how does it happen that wherever such diseases are most prevalent, there the human race has degenerated? Where can one country be found wherein malaria, yellow fever, or cholera, have continuously prevailed, that is not a country wherein the deaths exceed or encroach upon the births, wherein the inhabitants are not physically as well as morally degenerated specimens of a vigorous race? Surely, never was any blessing so disguised as is this alleged "most valuable" hereditary resistance to disease!*

Are there other causes which fully and satisfactorily explain the great diminution of certain virulent diseases in all civilized countries, and thus deprive us of all excuse for presuming to make any questionable demands for the explanation on that most uncertain cause, heredity? Very certainly there are, and it is these unanimously admitted causes which inspire the sanitarian with enthusiasm, and justify his rational experimental efforts, however abortive one after the other of these may prove to be, to stamp out every contagious and spreading disease on the face of the earth. Mankind must not be permitted to forget what were the conditions of their existence about 300 years ago—the period contrasted by Dr. Lyman, with the present. Then the "black death," the plague, the sweating sickness, the jail-fever, scurvy, small-pox, syphilis, and other virulent dis-

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Even if the claim made, in behalf of the gradual development of an hereditary resistance to certain diseases could be established, it would not by any means be thereby proved that it would be best for man, under existing conditions, to undergo all the suffering and delay necessary to eventually develop a universal insusceptibility. By constant nudity man might develop a protective covering of hair, but the conditions which render this needless are much more favorable to human progress, the ultimate survivors of ancestral exposure to malaria might be possibly, but most improbably, malaria proof, but drainage yields in any case far better results.

Survival of the fittest influences, of course, the results of continued exposure to disease, but the favorable results thus brought about should not be confused with those alleged to be due to immunity from a disease, especially a non-recurring disease, developed in descendants because their ancestors had suffered therewith.

cases, caused such frightful ravages that this generation may well stand aghast. The blessings due to the total disappearance or great diminution of these diseases are inestimable. Have their disappearance or diminution been due to the attenuation of their viri through the diffusion of these diseases, and to an elaborated hereditary resistence to them? A visit to our English, and generally to our European, ancestors of about 300 years ago will suggest the answer and may repay us. Our best historians report that at that period the vast majority of our ancestors, namely, the "common people," were subjected to the following conditions of existence: *

War, Famine and Pestilence.—Incessant wars increased the frequency of famines: these aggravated pestilences; the poisons of these, scattered broadcast by those unsurpassed diffusers, marching armies and marauding soldiers, produced a "pandemicity and continuity" of spreading diseases to an extent which, however much now commended, kept the people wretched, degraded and "thinned out."

Wages—Macaulay states that *only* 200 years ago, after great social progress, the wages of the common people in England barely averaged $1 00 to $1 50 (four to six shillings) per week without board: that nearly all the prime necessaries of life were dearer than now, and that one-fifth of the total population were helped to live by the public "poor-rates."

Malaria in the country.—England had "fens forty or fifty miles in length, reeking with miasm and fever," and inhabited by "ague-stricken peasants."

Streets—In towns "the streets were filthy beyond expression. After nightfall a passenger went at his peril, for chamber-windows were opened and slop pails were unceremoniously emptied down." These streets were infested with swarms of domestic animals; were destitute of lamps; some were only six feet wide, and many were too narrow for a cart to pass. Crooked, unpaved, filled with rotting vegetables, animals and offal, they were "very unsavory as well as very filthy."

Houses.—The houses of the common people were "made of

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* The works of Hume, Macaulay, Draper, Haecker and Dr. W. A. Guy, furnished the following citations.

reeds or sticks, plastered over with mud;" "the fire was chimneyless," and from the fire-place "smoke escaped as best it could without the help of chimneys, for these, though introduced in the twelfth century, were but slowly acclimatized;" the dark, ill-planned houses, cut off from fresh air and sunlight, had "no windows of glass nor even of oiled paper," and it was not until the first half of the eighteenth century that house ventilation began to excite some attention; the rooms had mud floors, "covered with straw, sedge or reeds, and rarely with tiles or slates;" even of the palace at Greenwich it is stated that "though fresh rushes were supplied from time to time, there would remain, sometimes for twenty years together, a substratum of the most nauseous and disgusting description, and it appears from earlier accounts, and from certain civic restrictions and regulations, that this loathsome mess was at length turned out into the narrow streets, to be consumed by dogs, cats, pigs and poultry, or imperfectly washed away by the rain;" in the country "houses, stables and offices were under one roof," and even the country gentlemen had "the litter of the farm yard gathered under the windows of his bed-chamber." "The prisons were hells on earth, seminaries of every crime and of every disease;" filled in largest part with debtors, these were so crowded together that an allowance of only 150 cubic feet to each was common; no bedding, not even straw, was provided, and those who procured straw often used it until "almost worn to dust," while "some laid on rags, some on the bare floors; the prison-rooms were without fire-place or sewer, and so extremely offensive that those who tarried in them stunk for hours; in fine, the crowded debtors' prisons presented an unparalleled combination of physical and moral evils, a seething mass of crime, misfortune, low vice and debauchery," and so continued until John Howard's day, about 1774.

Bedding and Clothing.—The common people slept on piles of straw, "on straw pallets or rough mats," and even the townsman's "bed was a bag of straw with a fair round log for his pillow." "The sheep's skin was in common use as clothing," but "if a man was in easy circumstances his clothing was of

leather, while, if poor, a wisp of straw wrapped around his limbs kept off the cold." "Vermin abounded in the clothing and beds." Only in modern times and by very slow degrees did "articles of cotton and linen come into use as clothing worn next to the skin, easily cleaned and readily changed, and soap, soda and potash, find their way into every household as abstergents." In these good old days, personal uncleanliness, even a religion with some, was unavoidable with the many, so that even the plumed knights and noble gentlemen (so often envied by the callow youths of our day), were forced to resort to the strongest perfumes to enable them to endure a congregation of themselves.

Diet.—"There was no commerce to put off famine," which frequently occurred; "the common food was peas, vetches, fern-roots, and even the bark of trees;" if the rural population were "able to procure fresh meat once a week they were considered to be in prosperous circumstances, and one-half the families in England could hardly do that;" the chief animal food was salt meat; rye bread was used instead of wheat, vegetables were uncommon articles of food, and even the potato was very slowly introduced by modern civilization. Drunkenness was in England universal; to drink until literally "under the table" was a common habit; only within recent times, and very slowly, have tea, coffee, chocolate and tobacco been introduced into common use, supplanting in some measure the excessive abuse of beer and ardent spirits.

Licentiousness.—The fearful spread of syphilis demonstrated the secret wickedness of society and the frightful immorality of the times: "If contemporary authors are to be trusted there was not a class married or unmarried, clergy or laity, from the Holy Father, Leo X., to the beggar by the wayside, free from it." "To so great an extent had these immoralities gone, that it was openly asserted that there were one hundred thousand women in England [when the total population was only five millions] made dissolute by the clergy, and it was well-known that brothels were kept in London for their use." "In the case of mortal sin," an ecclesiastic could commute it for less than two dollars, *i. e.*, for "six shillings and eight pence." For

such reasons the march of syphilis "was equable, unbroken, universal," devastating the whole of Europe.

Crowding.—As wars were constant, armies, which have always proved to be the crowds best adapted for diffusing epidemics, were ever in motion. "Cities were crowded fortresses, narrowly built, kept in a filthy state and surrounded with stagnant ditches." Queen Elizabeth proclaimed, as to London, that "the poor people inhabiting small rooms were heaped together, and in a sort smothered," and, therefore, prohibited the building of any more houses within three miles of the city.

A final reminder will conclude this brief record of past sanitary conditions, of which sufficient relics still remain, to convince us that these conditions have not been exaggerated. An historian teaches that, for the common people, the only physician was the monk with his crucifix and that the only sanitary provisions were the paternoster and the ave; so that epidemic diseases were completely unrestricted, rioting in Dr. Lyman's commended purgatory of pandemic diffusion and continuous prevalence.

The results of the grossly insanitary evils, now stated, were such that even as recently as 1685—not a sickly year—the death-rate of London was 43.5 per 1000 population, while in recent years this death-rate has little exceeded one-half of this. Macaulay says that the difference between London in the seventeenth and in the nineteenth century "is very far greater than between London in an ordinary season and London in the cholera," and furnishes the following additional lesson: "It is now the fashion to place the golden age of England in times when noblemen were destitute of comforts, the want of which would be intolerable to a modern footman; when farmers and shopkeepers breakfasted on loaves, the very sight of which would raise a riot in a modern work-house; when men died faster in the purest country air than they now die in the most pestilential lanes of our towns, and when men died faster in the lanes of our towns than they now die on the coast of Guiana. We, too, shall in our turn be out-stripped, and in our turn be envied." It is to promote this anticipated result for our descendants that sanitarians contribute their enthusiastic labor. Re-

calling the means by which those terrible foes to human progress, the "black death," the sweating sickness, the jail-fever, scurvy and small-pox have been scotched if not killed, sanitarians will continue to advocate the perfecting of all those means which experience has proved, or may prove, efficient to diminish disease and to stamp out pestilences; and they will continue to reject all unproved methods which require them to abandon *those* methods proved to be even temporarily advantageous.

From all which precedes, the following conclusions are drawn: The progressive amelioration of insanitary evils is well proved, and amply suffices to explain the progressive amelioration of virulent diseases, without taxing for explanation such unproved causes, as attenuation of their viri and as heredity, both of which alleged causes fail to this day to manifest the alleged favorable results whenever these diseases are subjected to the same grossly insanitary conditions which in the past so intensified their evil results.* No man can yet prove that endemic virulent diseases must exist, any more than he can prove that dry rot, potato-rot, ergot, lice, mosquitoes, the cotton-worm, the itch-mite, tape-worm, etc., cannot be exterminated. No man can yet claim that the causes of measles, scarlet fever, etc., are "out of our reach," that adequate efforts have ever been made to stamp them out, and that mankind is and always will be incapable to make the necessary efforts. No man can present anything like adequate evidence to prove that the injury to mankind would be greater, if measles, etc., recurred after having been banished for any given number of years, than if they prevailed continuously to said date; it being admitted, of course, that the injury would be much more striking in the former case, even if not so great as in the latter. No man has

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*Dr. Lyman is the suggester of the following syllogism: Measles, because it had never before prevailed among them, destroyed one in every ten of the total population of the Sandwich Islands. Therefore (?) measles, long endemic in the United States, thereby furnishing its citizens good opportunity to acquire hereditary resistence to it, destroyed in 1862-3, even more United States soldiers than it had Sandwich Islanders. This non-sequitur, which rebuts his theory, he explains by stating that these soldiers were subjected to unusually unfavorable sanitary conditions—such as were no doubt, usual with the Sandwich Islanders—and thus his last admission supports that conclusion which rejects his hereditary tolerance and his attenuation of viri by their prevalence. However, if his conclusion is illogical, his premises are not less imperfect, provided that the official reports of the United States army are correct for these state that only one soldier, out of about every sixteen *of those attacked*, died with measles. The suspicion is justifiable that the statement he makes about the Sandwich Islanders also requires an official report for its credence.

yet proved that endemio-epidemic virulent diseases more especially "single out the low-spirited, intemperate, the debilitated," in fine, those too ill-organized to propagate a vigorous race—any more especially than cold, hear, conflagrations, storms, floods, famine, etc., show a like preference for weeding them out; no one can prove that men are not as well justified in efforts to restrict the former as the latter; and very certainly no one can prove that nature is *so malevolent* that ample and more efficient means than epidemics have not been provided to secure the survival of the fittest, beneficent means, sparing, in much greater number, those *fit*, while weeding out those *unfit* to survive.

Until these various propositions shall be disproved, sanitarians will refuse to endorse conclusions derived from such improbable and unproved premises—as spontaneous generation, as a disease-force, as the attenuation of virulent viri by spreading them, and as the hereditary resistance to such viri. Even the "ordinary average sanitarian," so much disparaged, will prefer to remain in the dark valley of active experimental efforts rather than risk the danger of incurring a paralytic vertigo in striving to mount to "the broad level" of such science and of such philosophy.

Finally, even at the time when Spencer violently opposed the ordinary methods of sanitarians, he eloquently urges all men, as is now urged on those members of this association who have a "healthy faith" in man's power to stamp out eventually such diseases as measles, scarlet fever, etc., that they can in no way so well hasten human progress, illustrate the law of evolution, and obey the law of God as by strict fidelity to conscience—that conscience which incites them to take part in every rational effort to accomplsh their divine purpose. Spencer, who has cause to exclaim "Defend me from my friends, I can defend myself from my enemies," strenuously insists that by thus acting you will best perform your part in evolution, whether you fail or succeed in your conscientious efforts.

The Curability of Cancer.

A CLINICAL LECTURE.

By T. G. RICHARDSON, M. D.,

Professor of Surgery in the Medical Department of the University of Louisiana, and Attending Surgeon to the Charity Hospital.

Gentlemen—As you are all aware, the term *cancer* is employed by unprofessional persons and not a few medical men, to designate all morbid growths which exhibit malignancy, or, in other words, whose natural tendency is to supplant and destroy the tissues in which they occur, and sooner or later to extinguish the life of the individual. Many of the best pathologists and surgeons of the present day, however, limit its application to the group of neoplasms known as carcinoma, comprising scirrhus or hard cancer, medullary (encephaloid) or soft cancer, and epithelioma or skin cancer. To these are sometimes added melanotic, colloid and adenoid cancers. The three first mentioned possess a marked identity in their minute anatomical structure, being composed of two elements, a fibrous stroma and nests of enclosed cells, presenting all the characteristics of the cells of epithelial tissue at different stages of its development.

From these facts concerning the essential anatomical nature of carcinoma, the doctrine of the local origin of the disease follows as a natural deduction. However contradictory this may be to the opposite theory held by all surgeons, with scarcely an exception, less than half a century ago, a theory with which I was myself most thoroughly indoctrinated by my private preceptor, the distinguished Prof. Samuel D. Gross, M. D., I think we are bound to accept it, and consequently to admit the curability of the affection by extirpation or local destruction. Recurrence of the growth either in the cicatrix, or in any other part of the body, and its multiplication in the internal organs do not invalidate this position, inasmuch as these farther developments are no more difficult to account for by ascribing them to local action, than to the presence of cancer germs existing in the circulating fluids. Scarcely any one is ready to adopt the latter explanation in consequence of its many and insurmountable ob-

stacles, but it is necessarily implied in the acceptance of the doctrine of the constitutional origin of the disease. As a matter of fact we have no knowledge of the primary or determining cause of cancer; but, nevertheless, we are compelled to adopt a theory in regard to the question, and, as conscientious surgeons holding human lives in our hands, to make sure that our beliefs rest upon sound reasoning.

I repeat, then, that judging by the nature of the pathological elements composing carcinimatous or cancerous growths, we are justified in pronouncing them, wherever and under whatever circumstances they may appear, local affections. As I have already stated, the cancer cells which were at one time considered by many good microscopists as a new product and pathognomonic of carcinoma are now generally acknowleged by the best pathologists to be in all probabilty epithelial cells in an incomplete or fœtal condition, and hence cannot be looked upon as unnatural or foreign to the system in which they are found. The only thing abnormal about them is their excessive development in certain localities, forming masses which have a tendency to infiltrate the adjacent tissues, and, possessing but a feeble organization, to disintegrate more or less rapidly by ulceration. The so called *cancerous dyscrasia* which occurs in the advanced stage of the affection is not therefore due to any specific contamination of the system, either primarily or secondarily, and differs in no respect from the general depreciation of the vital powers produced by many other protracted and exhausting diseases. I have but little hesitation therefore, in asserting that when a cancerous neoplasm is *entirely removed*, as it may be sometimes when found in the female breast, the testicle and some other isolated situations, and healthy cicatrization ensues, the surgeon is justified in pronouncing that the disease is cured. The only difficulty is to determine whether the removal has been complete, and the only assurance we can have on this point at the time of operation, must be based upon the extent to which the apparently healthy tissues in the immediate vicinity have been sacrified. However, notwithstanding our prodigality in this regard, we can never promise immunity in the future; for although we may have removed every single cancer cell from

the part affected, the unknown, and possibly unknowable cause which determined its original appearance, may in like manner, cause its development in the same, or some more distant part.

As demonstrated to you repeatedly in this hospital, the degree of malignancy manifested by the several species of carcinoma varies very greatly, the medullary or encephaloid species holding the highest, and epithelioma the lowest place. The latter, indeed, is so often permanently cured by operation, that but for its histological likeness to the others, it would be taken entirely out of the group by those who hold to the constitutional origin of cancer. But its place being indisputable in consequence of its anatomy, which, strange to say, approximates more nearly to that of encephaloid, the most malignant of the series, than to any of the remaining members, and its equally indisputable character as a strictly local disease, afford strong presumptive evidence in favor of the position which I have taken in regard to the other species of the genus. I have not kept a record of my cases and operations, but when I tell you that removal of such lesions is by far the most common operation which I am called upon to perform, you may know that the number is very large; and yet I am sure that I am within the bounds of truth when I assert that at least eighty-five or ninety *per cent.* have been permanently relieved.

But not to dwell upon this form which has been so often brought to your notice during the current term, what, you may ask, is the evidence of the curability of the other species? I answer, by referring you to the experience of nearly every surgeon of large observation in this country, and in Europe, scarcely one of whom, I have reason to believe, has not witnessed instances of entire recovery after early and judicious operations for scirrhus, and entire freedom from the disease for many years afterwards. It is contended by S. W. Gross, M. D., who has written a most excellent book upon "Tumors of the Mammary Gland," that immunity after extirpation for a period of three years, should be accepted as proof of cure, and he asserts that not less than ten *per cent.* of all such operations upon the breast, whether performed properly or improperly, early or late, have been successful.

But suppose that only one undoubted cure could be proved, would not this, provided all sources of error in diagnosis and subsequent history were rigidly excluded, be sufficient to establish the verity of the doctrine? I venture confidently to affirm that I have had such cases. The first one occurred more than twenty years ago, but so thoroughly was I imbued with the theory of the constitutional origin, and consequent incurability of the disease by local means, that I scarcely dared to admit it as an exception, but endeavored to satisfy my mind by suggesting the possibility of error in diagnosis. Since then I have had others of a similar character, which together with the recorded like observations of many recent pathologists have led me gradually to assume my present position. It will probably interest you to hear the history of two of these cases, and I beg in advance to call your attention to the fact, that in the one to be first recounted, the same I have just referred to as the first which made any decided impression upon my former faith, nature, apparently not satisfied with my attempt, taught me a lesson in operative surgery, which I now clearly see ought to have been accepted by me without distrust or delay. This lesson was that in order effect a cure the largest practicable sacrifice of the tissues adjoining the tumor is indispensably required; and I trust by these remarks, desultory though they be, to succeed in teaching you the same. No operation for scirrhus has any claim to be considered radical, unless the *most liberal* allowance is made for the presence of cancerous elements, unappreciable to the sense of touch or unaided vision, but radiating as it were from the entire circumference of the tumor into all the surrounding parts.

Case I. Mrs. A. P., aged 55 years, married, but childless, consulted me in the year 1859, for a hard "lump," which had been growing for many months near the middle line of her back in the lumbar region. I found a somewhat knobby tumor of almost stony hardness not larger than a pullet's egg, lying just underneath, but adherent to the skin, and very near the spinous process of the second lumbar vertebra, to which it was also attached. It was nearly insensible to the touch, but the seat of occasional lancinating pain. It was not otherwise very annoying, except when chafed by the waist-bands of the clothing. Although it possessed all the clinical characteristics of scirrhus, I scarcely dared to pronounce it such in

consequence of the extreme rarity of such tumors in that immediate locality. However, I removed it with the knife, sacrificing the adherent skin and shaving the deep attachment from the bone. Subsequent examination of the growth by the microscope, as well as the ordinary methods, proved conclusively the accuracy of the diagnosis. The wound healed kindly and for at least six months there was no recurrence. But about this time another well defined tumor possessing the same characteristics showed itself upon the outer aspect of the left arm at a point where a short time before a punctured wound had been accidently made with penknife. My worst fears as to the general infection of the system were now confirmed, and I was therefore in no haste to resort again to excision. During this delay the tumor continued to grow, became the starting point of pain darting toward the head and the chest, and very naturally a source of great mental distress to the patient, who therefore demanded its removal. It had now attained the size of a walnut, and involved the superjacent skin. Before, however, the day was fixed for the operation, the parts immediately around the tumor, in consequence, it was supposed, of a bruise, became much inflamed. In spite of active treatment a species of phagedemic ulceration rapidly set in, forming a complete trench about half an inch in width around the entire circumference of the solid growth, and in less than a week the latter was thus completely enucleated, leaving a large suppurating excavation, which soon become filled with granulations, and healed without more than the ordinary attention. The tumor, thus strangely dissected out of its bed, proved to be in all respects similar to the one which appeared in the loins.

I kept trace of this patient for at least fifteen years after the operation performed by nature, up to which time there had been no recurrence of the disease, and I have some reason to believe that she is still alive.

CASE II. In November, 1872, in consultation with my distinguished colleague, the late Professor Warren Stone, M. D., I examined a married lady *æt.* about 45 years, for tumor of the breast. It had been growing for twelve or fourteen months, was nearly as large as an orange, and presented all the historical and physical characteristics of genuine scirrhous cancer. Indeed, the adherent skin had already begun to ulcerate, infiltration of the surrounding tissues was unmistakeable, and some of the lymphatic ganglia of the axilla were enlarged and indurated.

Her health being otherwise good, an operation was advised, and agreed to, with a clear understanding upon her part that there would most probably be a recurrence at no very distant day. The following week I excised the entire breast, together with a large group of indurated axillary ganglia. Owing to the large size of the organ, the necessity of including a broad layer of skin, and the extension of the incisions into the axilla, the

gap made by the knife was more than eight inches in length and three in width at its broadest part. The great pectoral muscle was not simply dissected, but superficially shaved off. Union by the first intention took place throughout the greater part of the wound, and at the end of a month or six weeks cicatrization was complete.

The tumor was subjected to the most thorough examination, not only by myself, but by a careful microscopist, and its carcinomatous nature clearly demonstrated.

Seven years after the operation a suspicious induration was discovered at the lower extremity of the cicatrix. This was removed by Professor S. D. Gross, M.D., who pronounced it cancerous. Since then there has been no farther return.

The remarkable success in this case was mainly due, in my opinion, to the extensive dissection necessitated by the large size of the mammary gland, and the careful removal of all the axillary ganglia which seemed to be in the least degree affected.

I have no original observations to present in regard to the curability of medullary cancer. This form of the disease is far less commonly met with than epithelioma or scirrhus, occurs for the most part in situations where it cannot be thoroughly isolated, and involves with great rapidity all the adjacent tissues. Hence it seldom affords the surgeon the opportunity of making the bold dissections which are indispensable for successful results. Cures are however reported to have occurred after early amputation when the morbid growth has appeared in the distal parts of the extremities. But it is not my intention on the present occasion to discuss this branch of the subject nor that relating to the curability of the more doubtful forms of carcinoma known as adenoid, melanoid and colloid cancer.

Reduction of a Dislocation of the Head of the Humerus of Nearly Eleven Weeks' Standing.

Charity Hospital; Service of Professor T. G. Richardson, M.D., Reported by B. M. Hughes, Resident Student.

H. Rhodes, aet. 32, steamboatman, fell through the hatchway into the hold of a steamboat, October 7th, 1880, bruised himself severely, especially in the right shoulder. Called in a physician the next day, who declared the injury to be only a con-

tusion. Came to the city January 20th, 1881, and consulted Dr. G. K. Pratt, who immediately detected a dislocation, and sent the patient to Professor Richardson's ward in the Charity Hospital.

The displacement was forward, the head of the humerus resting a little to the inner side of the coracoid process of the scapula, and yet not quite enough forward to constitute the subclavicular variety, although sufficient to give rise to shortening of the arm to the extent of an inch.

The patient having been placed under chloroform, two attempts at reduction were made by the usual manipulation —Smith's method—but without success. Extension and counter extension were then made by what is known as White's method, in which the surgeon draws the arm forcibly upward upon a line parallel with the body while he presses with his foot upon the acromion process. This having been maintained steadily for a couple of minutes, the limb was brought quickly down to the side of the body over an assistant's fist placed in the axilla as a fulcrum. A single attempt was sufficient; and the reduction was accomplished without the slightest injury to the axillary vessels or nerves. The limb was then confined to the side of the chest by a broad roller, and the patient left the hospital the following day.

CORRESPONDENCE.

MARTHAVILLE, NATCHITOCHES PARISH, LA.,
January 16th, 1881.

Editors New Orleans Medical and Surgical Journal,

DEAR SIRS:—I have long contemplated calling the attention of the medical profession to the great value that long and varied experience has caused me to place upon heat as a curative agent.

From time to time I have postponed it, that I might make assurance doubly sure by further experience and observation,

until I am fully assured that it can be placed at the head of remedial measures—nay more, that it is more potent and valuable than all others, now in use, combined. This assertion may seem ridiculous and be pronounced false by the profession generally, but he only can *know* whether it is true or false, who devotes to it years of careful observation and experiment, as I have done. Accepting as true the dogmatic assertions of those who presume to teach has done much harm in medicine, as well as elsewhere; and I shall be content, if able to induce even one of your readers to give this question a careful and painstaking examination, reporting in candor the facts which experience may give him.

After all, we shall find that the "Thompsonian System" of practice had some foundation in fact; and that the mistake made by Mr. Thompson and his disciples was in supposing that steam was a great remedial agent, while it was in fact only an imperfect vehicle, through which the real curative agent—heat—was applied to the system for the removal of its ills. After becoming satisfied that heat had, as a remedy, powers hitherto unsuspected, I tried its exhibition in water and its vapor, obtaining good results in many cases; but finding it generally unsatisfactory and often inadmissible when thus applied, on account of the humidity, I devised a convenient method for applying *dry* heat by means of the hot-air bath. The success of the remedy thus administered has ever been so unvarying and so gratifying, that I hope I may be pardoned for the bold declaration of my sincere conviction that, if the physicians of the United States would properly investigate this matter, the hot-air bath would come into general use and save annually, at least, a quarter-million of lives. When properly applied I regard it as almost a certain cure for all disease of malarial origin, and invaluable in the treatment of fevers and inflammation generally.

The inefficiency of medicine in cutting short typhoid fevers, is admitted by all. I have seen cases repeatedly cured in a very few days by being put, at an early stage, into a chamber, the air of which was kept regularly up to a few degrees above

fever-heat. Frequently a few hours are sufficient at once, if repeated a few times.

I should have the utmost confidence in this process of curing yellow fever, from what I have seen of its effects upon other fevers. Will not some gentlemen give the hot-air bath (continued from one to three days) a careful trial in the scourge that has done so much damage to the fair city of New Orleans?

Never having an opportunity myself to test this matter, I would be very glad indeed to hear from any gentleman disposed to consider the subject, and would give him the results of ten years' experience, as well as drawings of, and instructions for making, a very elegant and easily portable chamber, which I use in the application of hot-air to my patients.

Sincerely believing that, when the power of heat over disease is well understood, it will become the basis of a practice more successful than has ever before attended the healing art, I hope that some of our brethren, at least, will make it a subject of thought, observation and experiment.

J. N. LEE, M. D.

[The foregoing views are quite at variance with the doctrines at present generally accepted by medical men on the nature of the febrile process and its effects upon the animal economy. An elevation of bodily temperature above the normal standard is regarded as indicative of morbid action, dangerous in direct ratio to the exaggeration, and calling for measures to repress or counteract the process. Among the most effectual and approved modes of attaining this end, is refrigeration by the external use of cold water, which is precisely the opposite of dry heat. The cool and wet treatment in the typhoid, scarlet and yellow fevers, has been found so grateful to the patient, and so favorable in results, that it is hardly likely to be superseded by the opposite plan. The idea of counteracting abnormally high temperature by the application of more heat certainly looks like the doctrine of *similia similibus curantur*. If practiced at all, we think the dose ought to be infinitessimal, for the sake both of consistency and safety.—ED.]

Current Medical Literature.

TRANSFUSION OF BLOOD THROUGH THE PERITONEUM.

(Read before the New Orleans Medical and Surgical Association.)

Translation of Dr. JOHN DELL 'ORTO, with introductory remarks.

[Last winter I read before the Association a translation that I had made from an Italian medical paper, on the transfusion of blood through the peritoneum, according to the method recommended by Prof. Ponfeck, of Breslau, and I pointed out the satisfactory results obtained by Prof. Golgi, of Pavia, in an insane patient, on whom he operated at the commencement of January of last year. That paper was published in our Medical Journal, April, 1880.

Since that time eleven more transfusions were performed in Italy in extraordinary cases of supposed incurable anæmia.

I propose this evening to give you, *per summa capita* the history and results of each case as I translate from the *Scuola Medica Napolitana*, of Naples, and from the *Indipendente*, of Turin.]

Case II. A few days after the case of Golgi, Professor Conato, of the University of Turin, performed transfusion of blood through the peritoneum in a man affected with a very serious progressive pernicious oligæmia, probably due to the presence of a great quantity of ankilostomata in the bowels, and to the bad sanitary conditions in which this patient used to live. At the moment of the puncture he complained of an excessive pain, that ceased immediately during the injection. A quarter of an hour afterwards, vomiting and lipothymia appeared, but soon subsided. A few hours later he had a high fever, pains all over the abdomen, vomiting, hicough, and forty-one hours after the operation death occurred. At the autopsy, beside the signs of anæmia, a diffuse sero fibrinous peritonitis was found, together with many ankilostomata in the bowels.

Case III. Operation performed by Golgi and Raggi, in the month of February.

The patient was insane, oligocythæmic, extremely debilitated, and with a chronic intestinal catarrh. The other organs were healthy.

Operation lasted seven minutes, during which time 250 c. c. of defibrinated blood were injected. No trouble during the operation: no fever afterwards. The condition of the patient soon improved, the digestion became better, the intestinal catarrh diminished, a remarkable coloration was noticed in the skin and mucous membranes, also an increase in the strength; though the state of dementia continued, the memory and perceptions were revived, and the man became gay and talkative.

The hæmoglobine from 46.6 p. c. rose to 49.4 sixteen hours after the operation, and three days after it was as high as 61.9; but on the 20th day it fell to 50.

Case IV. Operated by Doctor Turati, of Milan.

For this case there was a little modification in the operation:—instead of pushing directly the canula into the cavity of the abdomen, a previous incision of the skin, half a centimetre long, was made. The canula used was similar to that for hydrocele, but cut as the nib of a clarionet, with a round point and very sharp edges. The quantity of blood injected was 250 grams in two minutes and half. The result was good—very light fever in the evening, a little pain in the abdomen, no complications. The wound of the skin healed by first intention.

Case V. A patient of Doctor Danga, of Pavia, operated by Professor Golgi.

A woman, reduced to extreme oligæmia, on account of a profuse metrorrhagia after child-bed, complicated with malarial infection. At the moment of the operation she had a little fever. Two hours after, the following symptoms appeared: nausea, a chilly sensation, general depression, threat of syncope, pains in the abdomen, and falling of the temperature: but soon a remarkable improvement was noticed, which continued steadily. On the 12th day the patient felt so well, that she asked to be discharged.

Case VI. Operation performed in Milan, by Dr. Mangiagalli. The subject was a woman rendered anæmic by hæmorrhage from placenta previa. No accident of importance happened during the first days. The patient was improving slowly, when on the 4th day a second hæmorrhage appeared, that caused instant death.

Case VII. On the 2d of June, Doctor Scottini, of Pavia, performed transfusion of blood in a peasant women, 45 years old, who was reduced to excessive weakness by oligocythæmia. The hæmoglobine in this case, as measured with the chromocitometer of Bizzozero, was only 11 p. ct. No trouble during the operation, but very little subsequent improvement. (The final improvement of this case is not given, but there is every reason to believe that the disease continued its course, and the woman most probably died.)

Case VIII. On the 13th of June, Golgi and Raggi repeated the transfusion of blood in that insane patient, who was the subject of the third observation. During over two months after the first operation the man enjoyed very good health; but the intestinal catarrh returned, with sudden loss of appetite, immediately followed by extreme weakness—hæmoglobine, 43 p. ct. As the many remedies administered failed to relieve the patient, the gentlemen decided to operate a second time 368 c. c. of defibrinated blood taken from a very robust man were injected. The result was more satisfactory than in the former operation. Hæmoglobine rose in eight days to 50 p. ct., and at the latest accounts the patient was doing well.

CASE IX AND X. Drs. Silva and Lauza, of Turin, operated twice on the same patient. The first time it was on the 11th of June, and two hundred and fifty c. c. of blood were injected. As the patient did not seem much relieved, a second transfusion was made on the 26th, on which occasion the doctors injected three hundred and fifty c. c. The result was good.

CASE XI. At the commencement of December, a woman was operated on by Dr. O. Giauhi, in the insane asylum of Racconigi, and the result was a sudden increase of strength, and an extraordinary improvement in her mental faculties.

CASE XII. Finally, on the 9th of December, Prof. Concato, of Turin, performed transfusion in a very chlorotic girl, sixteen years old, who died six hours and a half after the operation.

MEDICAL TOPOGRAPHY OF NEW ORLEANS: WITH AN ACCOUNT OF THE PRINCIPAL DISEASES THAT AFFECTED THE FLEET AND ARMY ON THE LATE EXPEDITION AGAINST THAT CITY.

Communicated by a NAVAL SURGEON.

* * * * * * *

New Orleans is situated in 30 degrees of north latitude, and 90 of longitude west from London. It stands on the left bank of the Mississippi, about one hundred miles from its mouth, and may justly be regarded as the capital of this district of the New World, from its commerce, its opulence, and its population. It is the great emporium into which the scattered inhabitants of the upper country, and the surrounding desert, pour their cotton and their skins, receiving in return many of the necessaries of life and some of the luxuries of refinement.

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The climate, too, of New Orleans must not be overlooked, as its peculiarity, co-operating with the above mentioned distribution of the Mississippi and the condition of the soil, is the real and only cause of those formidable diseases to which this city and its vicinity are subject. It is one of the anomalies of the New World, not yet very satisfactorily accounted for, that the intensity of the heat in the summer, and of the cold in winter, is much greater than in the Old World, on the same parallels of latitude. This difference is very obvious all along the eastern shores of the American continent, but nowhere is it so striking as at New Orleans. From the end of November till the end of March, the weather is generally cold and rainy, with frequent hard frosts. At those times the thermometer ranges from 20° to 40° in the shade; and there are instances, I am told, even in so low a latitude as 29° north, where in the night, it is only a few degrees above zero. On the contrary, during summer this climate has all the characteristics of the torrid zone; the thermometer stands at 87° or 90° in the shade. At New Orleans, especially, the weather is close and suffocating, from its dis-

tance from the sea, and, consequently, the entire absence of that inestimable luxury of a tropical climate, the *sea breeze;* from the air being loaded with watery vapours; and from the smell of the mud of the river and swamps, which is often, even in winter, very sensibly offensive.

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The local peculiarities in the climate and soil of New Orleans give rise, during winter, to epidemic dysentery, and, in summer, to marsh fevers of a very rapid and dangerous form, from which the inhabitants, but particularly strangers, suffer most severely. The occurrence of such complaints, some readers, from the above detail, will be prepared to expect as a *necessary* consequence. Lest others, however, should be sceptical, it shall be my business, bye and bye, to make this preliminary picture of the medical topography of the country subservient to discussions of higher interest, and to prove, by facts, the reasonableness of opinions.

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On the first appearance of dysentery, its treatment was commenced by a flannel roller bound tight around the abdomen, and ordering flannel clothing next the skin, if the patients had it not already. Saline cathartics, or oleum ricini, with a few grains of calomel, were repeatedly given, until the stools were increased in quantity, and more freely rendered. At the same time, plentiful dilution, with tepid gruel, warm tea, rice-water (seasoned with sugar and *a little* wine), decoctions of linseed or of gum-arabic, I always considered of primary importance.

When the primæ viæ had been fully evacuated, an attempt was made to restore the natural secretions, and open the pores of the skin. Antimonial powder, with opium, was employed for this purpose, but more generally the pulvis ipecacuanhæ compositus, which certainly seemed to succeed best.

Whenever tormina and straining returned worse than ordinary, a cathartic was given in the morning, followed by a large dose of opium, or an anodyne diaphoretic at night.

By these means, aided by perfect quietude, repose, and low diet, the pyrexia soon disappeared, and nothing remained but debility and irregularity of the bowels, which were to be removed by the Mistur. cret. c. opio, the Infus. quassiæ excels., or the Mistur. cinchon., given three or four times a day, and a gentle laxative once in three or four days.

Many of the earlier and milder cases yielded to this treatment, but those of a severer sort required measures less inert. In these malignant forms of the disease, I began by giving a strong saline or lubricating cathartic. Blood-letting also was practised when the patients were young and robust, or, indeed, whenever the force of the pulse and pyrexia seemed, on general principles, to justify it. I never saw cause to repent of this evacuation. Practiced with prudence, it often moderated local

pain in the abdomen, and did not perceptibly increase the subsequent debility. These preliminary steps being taken, I immediately commenced the use of *calomel*, and pushed on boldly to salivation, from the belief, which seems to be well founded, of an occult connection betwixt dysentery and a morbid condition of the liver.*

The doses I gave were regulated by the constitution of the patients, and the actual state of the symptoms; but one scruple night and morning was the most usual prescription, seldom less than ten grains thrice a day. I have given a scruple night and morning so often, that I have long ceased to be at all anxious about hypercatharsis. It certainly seldom, in any case, increases the tormina and tenesmus, but generally lessens both very materially, and produces five or six large motions, voided with less straining, and less tinged with blood. I have in this way given 16, 18, or 20 scruples of calomel in the course of half as many days, before the mouth became affected. When the gums were fairly sore, with some ptyalism, the calomel was omitted, the tormina and tenesmus disappeared as a matter of course, and the bowels gradually returned to their natural state. Some tonic or stomachic was prescribed during the days of convalescence; and, generally, as soon as the mouth was well the patients were fit for duty.

Calomel was often thus given alone and uncombined; but often I thought it preferable, on account of occasional symptoms, to conjoin with it two grains of opium, or to give at noon (in the interval betwixt the doses) twelve or fifteen grains of the Pulv. ipecac. compos. This was done to lessen the irritability of the bowels, and to support the cuticular discharge. Under such management, every case recovered where no *visceral obstructions* existed,† or where the co-existent disease of the liver was not irretrievable.

Opium is one of those remedies of doubtful utility in dysentery, which has been by some violently decried, and by others sparingly used, from its alleged tendency to check the natural secretions, especially that of the skin. Candour obliges me to say, that I have used it largely, and that I never noticed any of the unfavorable effects urged against it, but, on the contrary, can bear witness, with Dr. John Hunter, to its beneficial power. Given after purgatives, it can never be unsafe; and if it does no more, it procures a temporary truce from the disease. How

* A work has lately appeared, by Mr. Johnson, Surgeon, Royal Navy, wherein this connection is earnestly maintained and, I think, proved. Notwithstanding some assumed notions about the "Portal circle," rather hyperbolically extended, the work is really one of great ingenuity and utility. Perhaps its greatest fault is, the imposing air of novelty and exclusive improvement with which he promulgates his practice in dysentery —a practice long known to his brethren in the navy who have served in tropical climates.

† This is a more frequent occurrence, even in our own climate, than, I believe, is generally expected; but, of those who have lived for any length of time within the tropics, it will be found, that four-fifths have one viscus or other in the abdomen, more or less altered by morbid action. This opinion is deduced from a very considerable number of dissections of such subjects.

important a cessation from suffering is in every illness, but more especially in so endless and harassing a complaint as dysentery, I need not say. Prejudices, probably illusory and theoretical, ought to give way to an advantage so solid.

Almost the whole body of the profession have concurred in praising injections in this disease. I, of course, defer to the experience of others, while I detail my own. Having found them almost uniformly hurtful, I entirely laid them aside. The irritation produced by introducing the pipe, more than counterbalances the soothing effects of the injection. Besides the unpalateableness of this species of remedy to the good old English habits of delicacy, I have always seen that, were the enema ever so bland, or ever so small in volume, it could not be retained beyond a very few minutes, and always occasioned more straining and tenesmus in the sequel. As a commodious substitute for injections, I have directed patients to insinuate into the anus a *small* crumb or two of opium, softened betwixt their fingers for the purpose; or have caused warm fomentations to be used to the parts, and bladders of hot water to be applied to the hypogastric region. These are wont to succeed so well, that the patients speak in strong terms of the relief afforded.

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I have been thus minute on the subject of dysentery, seeing it was the principal disease by which we suffered. The practice above detailed was not merely my own, but was pursued, though perhaps with minute variations, by most of the medical officers of my acquaintance on this expedition.

I have before mentioned, that, besides dysentery, many cases of intermittent fever and scurvy occurred; in truth, the latter diathesis was often very conspicuous in the patients affected with dysentery. Of the intermittents I need not speak, as nothing remarkable took place in their symptoms, and they were all easily cured by the usual means. Of scurvy, however, from the great number of cases, and the fatality of some of them, it is necessary that I should give some account. Besides the customary symptoms of livid blotches, bleeding gums, and a slow healing of the small cuts or scratches accidentally inflicted, phlegmonic inflammation and suppuration sometimes occurred spontaneously on the leg, followed, when the abscess burst or was opened, by sphacelation of the cellular substance. Often, too, trivial sores would change in a night, and take on ulcerative action, with extensive sloughing of the integuments and muscles, and a most profuse ill-conditioned discharge. When the mere loss of parts was so considerable as to render it impossible to save the limb, and the resource of amputation was called for, the case did not often end well; for the stump, after doing apparently well, degenerated without any evident cause, and was seized with sloughing, a black thin fetid discharge, and a general melting away of the muscles, until they

were insufficient to cover the bone. Hectic fever and exhaustion gave the patient his last release.

In this formidable complaint, which may be denominated "sloughing scorbutic ulcer," many remedies were employed, both internally and externally. The internal ones were lime-juice, bark-mixture, and mineral acid; but it would appear that the former, though adequate to correct a mere proclivity to scurvy, has little or no power in these more advanced and serious states of the disease. In fact, it was not to be so corrected; it was not merely vegetable acid, but esculent vegetables, fruits, refreshments and repose, that were necessary. It was purely from the want of these that the people had suffered, for neither crowding, impure air, nor filth, had any existence in situations where this form of scurvy often appeared.

Equal parts of basilicon and oil of turpentine (melted and applied warm to the ulcer), mixtures of lime juice, or rum and water, charcoal cataplasms, common poultices, bark decoctions, or bark in powder, were employed as outward applications to a sore; but though they kept it cleaner, they were often of no avail to arrest the sloughing process. A solution of *two drachms* of *alum*, in about a *quart* of water, was, upon the whole, an admirable local remedy, and seemed to posses wonderful powers in stopping the ravages of sphacelus, and giving a healing tendency to spreading ulcers. For the knowledge of this application, which is not more simple than efficacious, I am indebted to the liberality of Mr. Boyd, Surgeon of the Gorgon Hospital-ship, a gentleman of uncommon ability and experience in every department of the profession.*

The detail of this season of peril and pressure closes here. It commenced about the middle of January, and its painful duration was upwards of two months. During the last week of March and first week of April, the main part of the expedition finally left those shores; therefore the observations I am about to make on fever, apply less to the armament in general, than to the force (chiefly naval) that was obliged to remain in the gulf of Mexico for several weeks after the rest had proceeded home.

The frosts and cold rains which had lately prevailed on this coast were now at an end, and the weather rapidly mounted to the average standard of the torrid zone. During April and May, the thermometer was never below 80°, and often indeed rose much higher. This greatly augmented temperature soon began to tell on the people, and gave rise to many cases of cholera and of ardent fever—the latter entirely confined to those who had previously been serving on shore, or exposed much to the sun and night dews while pulling in boats on the coast, or in the river of Apalachicola. Of the former disease, not one instance, so far as I know, proved fatal. Large doses

* I trust Mr. B. will excuse this unauthorized citation of his name and authority.

of calomel, with opium, and plenty of mild diluents, constituted the whole of the treatment. In ardent fever, however, the success, though great, was by no means so uniform. I here propose to throw together a few general remarks on this much agitated disease; to treat of it circumstantially, even were the limits of this communication to admit such detail, would, after the excellent works lately published on the subject by Dr. Bancroft and others, be entirely a piece of supererogatory labor.

In the Gulf of Mexico, the features of this fever were precisely such as I have been accustomed to see in the *kausus*, or yellow fever, so well-known in other parts of this great western Archipelago. It had the same præmonitory and leading symptoms, the same proneness to excessive arterial action, irregular local determination, and topical congestions of blood, with the same rapid and decided tendency to death. It was indeed a most formidable disease, and verified all that has been written about its danger In the milder cases, one in five or six is about the proportion of deaths, but, in the highest grades, if one-half survive it may be considered success!

Modern medicine has nothing of which it can boast, with greater justice, than the improvement of late years introduced into the treatment of this disease; an improvement which has apparently given more enlarged views of febrile diseases in general, and communicated an analogical impulse of boldness to the treatment even of European fevers, which it never had before. The contrast *abroad* betwixt the present and the "olden time," is sufficiently striking. The imaginations of professional men in tropical climates, were formerly held in subjection by that bugbear debility, and its train of needless terrors. Systems of nosology had been pleased to style the disease in question typhus icterodes; consequently active depletion was carefully shunned The practioner stood comparatively an idle looker-on during the early stage, prattling about the vis medicatrix naturæ, and fidgeting with his calomel and his James's powder. The disease of course *took its hue* from the species of treatment employed at first. The neglect of evacuations allowed the excitement to riot and revel unchecked; *hence* came petechiæ, vibices, hæmorrhages, and the rest of the direful consequences of overaction; *then*, indeed, the disease was pronounced *malignant*, *pestilential*, and highly *putrescent*, and the golden opportunity arrived for throwing in (as the phrase is) his bark, wine and opium, against that debility about which, at a wrong time, he was over solicitous.

That cabalistic word *typhus*, I verily believe, has slain its thousands and its tens of thousands. The effect of a mere word is often prodigious; for, as the famous Mirabeau once said in the French National Assembly, "words are things." Terms signify ideas—these constitute opinions—and opinions lead to acts. Everybody is now convinced how improperly the term typhus is affixed to the endemic fever of the West Indies;

that it is applied with more propriety to the majority of fevers in *our own* country, is to me by no means clear. While I acknowledge that, in the *made-up* constitutions of artificial life—amidst the squalid dregs of the population of a crowded and high-viced metropolis—some cases of fever occur where the brain labors merely through sympathy with the stomach and biliary organs, and where the lancet, for several reasons, is unnecessary, or inadmissible—still in by far the greater part, I suspect the reaction is sufficiently violent, and the determination to the contents of the head and belly sufficiently marked, to require, and to be greatly benefited by, blood-letting, either general, or topical, or both. The fever, however, is apt to be hastily pronounced typhus, and this sentence once passed upon it, typhus it must be; consequently, from day to day, the *name* of a disease is prescribed for with due solemnity and skill. To be sure, the morbid actions are fortunately seldom so concentrated as to resist the subordinate evacuations of purging and blistering; and so the patient frequently recovers in the end, after a protracted illness, which he, "good easy man," thinks has been quite unavoidable; charitably supposing "all's well that ends well." Even if we keep out of view the high moral responsibility for risks run, and sufferings protracted, which this inert treatment implies—even if we speak it with mildness—we cannot, in conscience, bestow on it any other than the negative commendation, that by its effects neither the patient loses his life nor the practitioner his reputation!

The same erroneous nomenclature which gave to ardent fever a typhoid character, in all likelihood originally produced the notion of its being contagious, a notion which has since been attempted to be maintained by a combination of learning and sedulous talent, that, by plausible reasonings and expertly laying hold of popular opinion, has sometimes had power to "make the worse apper the better reason." But the affinity which such nosological arrangements suppose, does not hold. Besides the known fact that febrile contagion will not exist in warm climates, but is more readily extinguished by atmospheric heat than by any other cause, there is such a difference in the first symptoms, progress, and duration, of ardent fever from those of typhus, that all who are guided by practical views, and are not misled by too eager a spirit of generalizing, have pronounced it a totally different disease, in fact a disease of inflammation. Such a radical difference of character argues a corresponding difference of causation. The origin of this fever has, therefore, been attributed to causes of a local or domestic nature, because the disease itself is found to be strictly local. It only prevails in countries within the tropics, and in them only at those seasons when the thermometer ranges from 80° to 94° in the shade. It is therefore justly believed to be owing to the diffusion in the atmosphere of those poisonous exhalations, which are elicited by the powerful rays of a vertical sun

from marshes, from putrefying vegetable matter, or from the soil itself of tropical countries. Miasmal poison is one of the most widely diffused causes of disease throughout the whole province of nature; and if northern climates know less of its pernicious effects, they owe this happy exemption solely to the inferior power of the sun's heat in collecting those noxious vapors.

Although the disease I speak of may be said to have its seat and throne within the tropics, yet in every country where the height of the thermometer is at certain seasons from 80° to 90°, fever, instead of the low type observed in high northern latitudes, assumes, in almost every instance, a decided inflammatory character. In short, amongst the febrile diseases of southern climates, there is a uniformity of character, which, in spite of hypothetical classification, powerfully argues a community of origin and of cause. For proof of these facts, I may refer to the valuable practical works of Dr. Irvine, on the diseases of Sicily, and Dr. Burnett, on the fever of the Mediterranean; as also to a judicious paper, by Mr. Boyle, published in the sixth volume of the Edinburgh Medical and Surgical Journal; and to the various reports of the American physicians.

Thus New Orleans, though without the tropics, is almost every summer visited by a *four* or *five day* fever, which has all the essential characteristics of the genuine *kausus*, and is in fact known popularly there by the name of yellow fever. This heavy infliction is entirely owing to its climate and locality, (which I have already taken pains to describe)—to that profusion of marshes with which it is surrounded. In this respect, however, it is not singular; many spots in the *interior* of America experience, during summer, the visitation of yellow fever, where from remote situation, and accidental non-intercourse, imported contagion is absolutely impossible. This is a staggering fact for those "demigods of fame," the abettors of contagion; but as New Orleans is a place of extensive trade, and has frequent communication with many islands in the West Indies (whence contagion *might* be imported), their spirits will, perhaps, revive at the sight of this "trou de rat," by which they have a chance of escaping from the difficulties and contradictions of their system. They may forthwith unlock their box of *debateables*, and expose to the public anew their battered generalities, thread-bare assertions, and damaged bundles of remarks. I shall, here, however, state one conspicuous fact, which will go far to forestall the endless fertility of their explanations.* Towards the end of March (1815), a fever of

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Few medical subjects have excited more acrimonious controvery, than the one here alluded to. The contagionists, sensible that the "*onus probandi*" lies with them, seem to wince and stagger under the burden with unequivocal signs of fretfulness and debility. If they can't keep their temper, let them, at least, keep silence! Since, they say, they have got truth and reason, and all the rest of the *good things* on their side, let them rest satisfied with their good fortune, and, like the sagacious Dogberry, "Give God thanks, and make no boast of it."

great rapidity appeared in New Orleans, which carried off many strangers, and some of the inhabitants. Let us here particularly attend to dates. The river Mississippi, during the whole American war, had been blockaded, and indeed latterly with such rigour, during the time our expedition was on the coast, that no vessel of any description had passed up to the city for months. The interdict was not taken off till the 21st of March, when the ratification, at Washington, of the treaty of peace, was officially announced to the admiral commanding the fleet in the gulf of Mexico. It was some time afterwards before any vessel entered the channel of the Mississippi. The fever had certainly existed several weeks in New Orleans before any strange ship arrived abreast of the town. Besides, every summer of the war, the city had suffered more or less from yellow fever, though all intercourse with the West Indies had been suspended. Can any facts be found more unequivocal, to prove that this fever is always strictly indigenous to the district where it prevails?

While at Pensacola, in May last, the recent endemic in New Orleans was described to me by a gentleman that had just quitted the city. We said, the disease first attacked with headache and sore throat, succeeded by violent fever, and proved fatal in three, four, or five days. The symptoms of cynanche I could well account for: The temperature was subject to sudden and considerable variations; it was not steadily above 80° in the day, and the nights were often cold. No wonder, then, that local inflammation of the tonsils often accompanied this fever. My informant further stated, that its appearing at least two months earlier than the usual epidemic, led the alarmed multitude to consider it a *nova pestis*, different from the ordinary summer visitant, more especially as, in the latter, sore throat was a symptom never found. But there are facts which explain its premature appearance very satisfactorily. In the winter the marshes had been first frozen, and afterwards overflowed by rains; the city, in a great degree, had suffered the privations of a siege, and there was an unusual influx of strangers. The previous weather having been so uncommonly severe, and the pores of the earth locked up, it was not expected, after such a state of things, that the sudden increase of temperature would disengage the long-pent seeds of disease, and would draw forth from the saturated earth a cloud of poisonous exhalations by day, to be condensed and fall upon the city during the chill of the succeeding night?

This is merely another added to the many facts already recorded (to which I have neither occasion nor room to refer) that appear to set the question of contagion at rest forever. On this subject, removed as it is from the cognizance of our external senses, direct proof cannot well be had; but, of there being no such thing as contagion, I myself have had abundance of negative evidence. At the period I speak of, as well as

during the time that the ship to which I belong was on the Jamaica station, when men labored under endemic fever, there was the most unreserved intercourse betwixt them and their immediate companions in the ship, who frequently visited them. The attendants of the sick-berth also were in the constant habit of lifting the patients out of bed, placing them in the cold-bath, changi g their linen, and administering to all their personal wants. In such offices, it is evident that these men must be exposed to contagion in all manner of ways, if it exist. Yet it so happened, that, in the very considerable number of instance of fever, even its worst grades, not a single individual of those that had hourly intercourse with the patients was ever seized with the disease. If even it had been otherwise, I am far from being disposed to grant that contagion was thereby proved (for, where *all* are equally exposed to the peculiar causes, seizures must often be indiscriminate); yet, since it so happened that the most frequent commerce with the sick never pro luced the same disease, that fact, however accidental, must go far to confirm the belief of its being non contagious. I firmly believe that (except now and then a sporadic case, induced by intemperance, or exposure to the sun, or night dews, acting on an accumulated fund of predisposition), in every instance miasmata are necessary to the existence of this fever. As its cause is local, so itself must needs be.

Thus much for the disputed doctrine of contagion.

The endemic fever of the West Indies is justly classed in the order of intermittents, which are universally believed to be of local origin and non-infectious; if, in the former, the intervals betwixt each paroxysm are shorter (and they are frequently so short and indistinct as to be not observable at all), it is owing to the superior virulence which the noxious miasmal exhalations acquire from the action of excessive solar heat.* In the higher grades of yellow fever, remissions cannot be perceived, at least, I never could notice them; in its less violent forms, such remissions are, generally speaking, perceptible enough.

I have never been able to see the propriety of the distinction which authors have drawn betwixt the different gradations of West India fever. Of this, as of all o her diseases, every case is not alike severe; yet the most violent cases they are pleased to demoninate *yellow fever*, while those of a milder form are called by the name of bilious remittent. This appears to me a distinction without a generic difference,

> "Facies non omnibus una,
> Nec diversa tamen, qualis decet esse sororum,"—

for these two forms have certainly the same inflammatory

* The thermometer placed in the sun in the West Indies about noon, generally stands about 127°. Few can imagine, unless they have felt it personally, how overpowering such direct and continued heat is. No wonder it produces violent effects on the inflammatory unassimilated diathesis of northern strangers.

character—the same morbid actions—the same tendency to local congestions of blood, and are merely varieties of the same disease—produced by the same diffusible poison—obeying the same laws—only modified by accidental circumstances of predisposition in the habit of the patient, or the strength of the dose of miasmal gas. It would introduce endless confusion into our nosological systems, were the ever-varying gradations of severity in any given disease assumed as a sufficient ground for referring it to a new cause or a new class.

Of the treatment I come now to speak. Regarding this disease to be, to all *practical* intents and purposes, inflammatory, and the affection of the head to be primary and essential, which is evinced by headache, intolerantia lucis, and red eyes, occurring as the earliest symptoms (for the eye is here an index of the state of the brain, in the same manner as the tongue is of the state of the stomach), I have never hesitated to push evacuations to the utmost. Bleeding from the arm or frontal branch of the temporal artery was always my first step; and large and repeated bleeding during the early stage (the earlier the better) I consider the great palladium of the patient's safety. One cannot tell how many ounces ought to be taken; we ought to bleed to syncope, to break the morbid association of the symptoms, and induce a speedy remission; for I am convinced, that it is less by unloading the vessels, than by the *shock* (I cannot express it in philosophical language) which it gives to the whole system, nervous as well as vascular, that blood-letting affords the magical relief I have so often witnessed. It is also by the inexplicable changes implied in the word *shock*, that cold affusion operates advantageously: for, in tropical climates, where the temperature of *sea water* is generally from 80° to 82°, its refrigerating power must be abated.

The state of the pulse is less to be regarded than the urgency of the other symptoms: even when the former is thready or undulating, the latter often imperiously demand renewed depletion; and their demand must be complied with at all hazards. In a disease like this, where the danger is frequently imminent in twelve or twenty-four hours, it is amazing how much its apparent character may be altered by active depletion. From a fever of the highest grade, management will change its complexion to one of the second or third order. To secure every chance of such success, no attention must be spared; the patient ought to be seen every two hours; and, whenever the febrile symptoms get up anew, new exertions must forthwith be made to subdue them.

It is a Herculean disease, and, without that almost omnipotent remedy, the lancet, we might be said to encounter it unarmed; for all other means are but of secondary force. It requires all the vigor and activity imaginable, else it will gain ground on us with rapid strides. A practitioner who will not bleed largely in the onset, will soon feel himself in the melan-

choly predicament of the celebrated *Julian the Apostate*,* who was hurried into battle with an active and unrelenting enemy before he had buckled on his armour, or prepared himself for his defence. Like Julian, he will feel his vantageless condition when it is too late, and will pay dearly (if he has sensibility), or at least his patient will pay dearly, the forfeit of such neglect; for be it remembered, that, in medicine no less than in politics, "Quicquid delirant reges, plectuntur achivi."

In this disease, therefore, it is indispensable to bleed again and again:—It is the main stay,—the sheet-anchor of hope. Without it, many, very many must infallibly be lost;—would that I could say that by it *all* are saved! But when it is recollected how often inflammation, even of parts not vital, foils all our exertions at resolution, it cannot be wondered at, if bloodletting is often incompetent to remove inflammation of the brain or abdominal viscera, organs endowed with high sensibility, extensive sympathy, and functions whose right performance is essential to life.

I cannot undertake to go minutely into all the happy results† of this decisive practice; in fact, it is the less necessary for me to do so, as it obtains so generally amongst surgeons employed in the service of their country in tropical climates, and has become such a favorite method, that, instead of an unguarded hortatory tone, it would perhaps be well to put in a *caveat* against the abuse of this most potent remedy. Of such abuse, I cannot say I have seen any example; but some friends, on whose judgment I place great reliance, have informed me that they have occasionally witnessed detraction of blood pushed to an unseasonable and improper length. This I can well believe, having felt by experience, that the great difficulty in treating this fever is to say *when* active evacuations ought to be laid aside. The exact decision of this point requires considerable *tact*, and a previous acquaintance with successive phenomena of the disease.

Purging, free purging, I have not hitherto mentioned, its necessity being so much a matter of course. A stimulus ought to be kept up constantly on the bowels, if with no other view than to relieve the head. Blisters and the cold affusion I have found to be valuable auxiliary remedies: I call the latter by

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* For the death of Julian, and the manner of it, see the elegant narrative of *Ammianus Marcellinus* (Hist. Lib xxx)., as also Mr. Gibbon's interesting account.

† It is remarked that patients who have been ill of fever are apt afterwards to die of dysentery or chronic complaints. Though thirty-seven of the crew of the frigate to which I belong labored under ardent fever on the Jamaica station, and though the ship afterwards suffered a good deal from dysentery in the gulf of Mexico, none of thirty survivors died of that or any other subsequent disease. It is therefore another praise of the depletory practice, that it leaves no visceral obstructions to be a source of after danger.

I shall here mention a farther indirect advantage arising from this method. In the early stage of ardent fever there is often a torpor of the bowels which renders them insensible to the stimulus of purgatives. When bleeding is practiced, either while the blood flows, or immediately after recovering from syncope, the cathartic previously given produces urgent calls to the seat and full purging. Venæsection certainly renders the body more susceptible of the action of blisters also.

the subordinate epithet of *auxiliary*, for to attempt (as some have fondly hoped) to extinguish this most violent fever by *it*, is like attempting to extinguish the crater of Mount Etna by water! It, however, reduces heat and invites sleep, and (what is of very great consequence) by its bracing power on the skin, it gives tone to the stomach, lessening nausea, and checking vomiting, a thing so much to be dreaded in every stage of this disease. With the latter view, also, I have found saline effervescing draughts, and small oft-repeated doses of calomel, highly useful.

These remedies are mentioned in succession according to their relative efficiency, but, in actual practice, their application must be contemporaneous. Bleeding, purging, cold lotions to the head, shaving the scalp, and general refrigeration by the cold bath, must be drawn up together in array against the disease, and must make a combined attack. A first or even a second disappointment must not rob us of our perseverance. Courage and constancy will in the end often succeed against great seeming odds. In short, the violent excitement must be got under by all means, ordinary and extraordinary.

I have never either tried or trusted to calomel as a *sialagogue* in this disease. The blind confidence in its supposed specific power has, I believe, nearly faded away before the better lights and the more speedy results which the depletory practice has afforded.* In ardent fever, where there is a morbid activity of the arterial, with a proportional inactivity (almost amounting to torpor) of the venous and absorbent systems, it is a matter of extreme uncertainty, whether mercurials can find their way into the system, until the paroxysm of fever is dissolved. Its action, even were it absorbed, would be rather hurtful, as favoring that depravation of the solids and solution of the fluids, which with the effect, putrescency, are so much to be feared in the latter end of continued fevers. Upon the whole, longer time and trials have only given additional strength to the opinion which Dr. Saunders pronounced on the inutility of mercury in the endemial fevers of tropical countries.

In cases that came under my care, I have been in the habit of giving three or four grains of calomel after the primary stage of fever, every three or four hours, with the view of deriving from the head and viscera, by keeping up a constant action on the intestinal canal, as also to carry off sordes, and to prevent vomiting. I preferred calomel, because, from the precarious state of the stomach, more bulky or more nauseous cathartics

* An attempt has lately been made to *clap up a match* betwixt the depletory and mercurial methods, and to call in the aid of both in the same case. The most respectable, if not the original proposer of this incongruous union, is Mr. Johnson, in his valuable work before referred to (see note page 136.) What table of affinities suggested this coalition, it would be vain to conjecture.

However ingeniously devised this combined system may be, it will never stand. Like the famous image in the vision of the prophet Daniel, it is formed of repulsive materials; the *iron* and *clay* will not coalesce—cannot amalgamate—but the baser matter will crumble to dust, leaving the other part to the enjoyment of proud perpetuity. The separation doubtless will be spontaneous, and the sooner it takes place the better.

could not, in all likelihood, be retained. When low delirium, coma, torpor, or the like occur, it may be desirable, as a last resource, to place the system under the influence of mercury; but, even under these circumstances (though the mouth was fairly affected), I have never been so fortunate as to see it of any avail in saving life.

Much has been said about the prophylactic virtue of this mineral in warding off the attack of fever. No one will deny that a mercurial course, by lowering the tone of the constitution, lessens the liability to this as well as all other inflammatory diseases; but some cases in point have fallen under my care, where men have been suddenly attacked with severe symptoms of the endemic, whose systems, for a week before, had been saturated with mercury on account of a venereal complaint. I therefore suspect that the influence of this metal as a preventive of tropical fever, is like that of the eruption of prickly heat (Lichen tropicus) on the skin, founded in error: the latter I know from repeated experience, has no other basis than hasty popular opinion.

It would be easy to extend these remarks on fever to a greater length; but I have endeavored to confine myself to leading points, and to those opinions of late authors which seem to admit farther elucidation. I am not altogether without hopes, that, notwithstanding the low standard of merit in which this communication must rank itself, perhaps I have furnished here and there a *raw material*, which may be *worked up* into something of utility; or a hint which even without any such expectation on *my* part, may be converted by others to the improvement of our profession, for which, in my humble sphere, I trust I am not without zeal and devotedness. At all events, a delineation of disease on a great scale, and detail of practical facts, can never be wholly useless; and I can only say, that I have described such facts and occurences accurately, as far as my means of information reached.

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—*Edinburgh Med. and Sur. Journal, April*, 1816.

A NEW METHOD OF WRITING PRESCRIPTIONS.

By C. H. MERRICK, M. D., Canyonville, Oregon.

Without preamble or preface, let me drive directly at the subject.

For John Smith.

2–16–1. No. 1.

Tinct. Opii. Camph.,	10	00
Tinct. Kino,	5	00
Potassa Bicarb.	3	00

Syrup Rhei Aromat. q. s.
Take a teaspoonful every 4 hours.
Dr.——— Date ———

For John Brown.

4–32–2. No. 2.

Bromide Potassa,	20	00
Iodide Potassa,	10	00
Fl. Ex. Valerian,	30	00
Sy. Auranti Cort.,	60	00

Aqua cin. q. s.
Take a teaspoonful every 6 hours.
Dr.——— Date———

For Mr. Jones.

6–48–3. No. 3.

Sy. Scillæ Simp.,	20	00
Vin Antimonii,	10	00
Sp. Æth. Nit.,	30	00
Tin. Opii Camp.,	15	00
Morph. Sulph.,		10

Mucil. Acacia——
Aqua Rosea. àà q. s.
Take a teaspoonful every 6 hours.
Dr——. Date——

For Mr. White.

8–64–4. No. 4.

Potassa Chlorate,	8	00
Tin. Ferri Chlo.,	4	00
Tin. Myrrh,	10	00
Sy. Sarsaparilla,	60	00
Tin. Aconite Rad.,	1	00

Aqua Cin. q. s.
Take a teaspoonful every 6 hours.
Dr.—— Date——

For Charley Smith.

2–16–1. No. 5.

Hyd. Cum Creta,	5	00
Santonine,	1	00
Pulv. Glycyrrhiza,	10	00

Take one every 4 hours during one day. Follow with oil at night.
Dr.—— Date——

For Mary Jones.

6–48 3. No. 6.

Bismuth Sub. Nit.,	10	00
Pepsine,	5	00
Magnesia Cal.,	15	00
Pul. Acacia,	12	00

Take one at each meal.
Dr.—— Date——

For Susan White.

6–48–3. No. 7.

Elix. Bis. Pep. & Strych.,
Elix. Calisaya Bark,
Vin. Portense,
Sy. Sim.,

Take a teaspoonful at each meal.

Dr.—— Date——

Explanation :—Look at No. 1. The 2 in the upper left corner means a two ounce mixture. The 16 means so many parts, powders, pills or teaspoonful doses. The 1 means that for every unit of medicine there is one unit in each part, powder or teaspoonful dose. For instance; there are 10 minums of tin. opii camp., 5 minims tin. kino and 3 grains pot. bicarb. to each teaspoonful of the mixture. Sy. rhei arom. q. s., means enough to make a "16," or 2 ounce mixture.

Look at No. 2. Here we have a 4 ounce mixture of 32 parts, and a half unit for every unit of medicine; that is to say, 20 half grains of bromide of potash, 10 half grains of iodide of potash, etc.

Look at No. 3. Here we have a 6 ounce mixture containing of syrup of squills twenty-thirds, or six and two-thirds minims, to each teaspoonful; fifteen-thirds of paregoric, or five minims, to each dose, etc. Mucilage and rose water q. s. to equal the six ounces.

No 4 is an 8 ounce mixture, and contains eight-fourths, or two grains of chlorate of potash; four-fourths, or one minim, of tincture of iron, etc., to each teaspoonful. But the directions require a table spoonful and of course four times the above amounts will be given, or just what the figures express as they stand. It need not be pointed out that an 8–64–4, mixture with table spoonful doses is precisely the same as a 2–16–1, mixture with teaspoonful doses.

No. 5 calls for powders. Here we might omit the first figure in the indicator, as surely the druggist must know that a two ounce mixture is not called for in this case, as there is no vehicle with q. s. added. As the prescription stands, the druggist would put up 16 powders made up of the three medicines in the proportions indicated. But suppose we add to the prescription this line: Syrupi sim. q. s. Then the druggist would put the three articles with syrup enough to make two ounces. The same remarks apply to No. 6. Read this prescription in the same manner we read No. 3. Suppose we change the indicator figures to 12–96–6. It is easy to see we reduce the medicines in each dose one-half. We can direct pills instead of 96 powders, and order as many to be taken at a dose as may seem necessary.

It will be noticed in No. 7, that the indicator figures are the only ones in the prescription. Of course it calls for a 6 ounce mixture containing equal parts of the four articles mentioned.

The beauty of this system consists in its simplicity of adoption, and in the important fact that any prescription shows on its face the exact number of minims or grains of medicine in each dose. Ten minutes' thought is sufficient for any one to put this system into immediate practice, as we do not have to forget our firmly implanted scale of doses as expressed by grains and minims. Do not raise the unimportant objection that this system is not an absolutely accurate translation of the old plan. It is near enough for all practical purposes, and wipes out the tangling intricacies of ounces, drams, scruples and grains. Remember that the figures are written decimally, those to the left expressing dollars and those to the right expressing cents. Thus a half dollar U. S. silver coin weighs 12.50, or twelve dollars and fifty cents, in other words twelve and a half grams. A quarter dollar coin weighs 6¼ grams; a dime weighs two and a half grams, and a nickle, five cent piece, weighs five grams. Weights are easily obtained from any whole-sale druggist. For filling prescriptions, weights or less than—10 are not required. Suppose I want to give a small dose of strychnine. I order: 8–64–4. Strychnine | 10. Each teaspoonful contains one-tenth of a quarter of a grain equal to one-fortieth of a grain. Now I direct ten, twenty or thirty drops as I may wish, thus getting a very small fraction of a grain at a dose. Or if I do not want to send so large a bottle to a patient, I order 4 | 00 of an 8–64–4, mixture as above, to be put into a 2–16–1 mixture, and graduate the dose accordingly. It is easy to understand the effect of figures on the right side of the line. Let us look at No. 3. Suppose we change the decimal line thus:

A	Medicine,	2	00
B	"	1	00
C	"	3	00
D	"	1	50
E	"		10

To each teaspoonful dose we now have of A ⅔, B ⅓, C 3-3 or 1, D ½ and E 1-30 of a grain or minim; in other words ten times less than before.

One word in regard to size of prescriptions. Take the figures 2–16–1 as a model, and we can order any amount from 1–8–3 to 16–128–8. The usual sizes are or should be 2–16–1, 4–32–2, 6–48–3 and 8–64–4. After becoming familiar with reading these indicators, it would be well enough to omit the first figure. It will not take physicians nor druggists long to fix in the mind that 16 means a two ounce mixture, 32 a four ounce, 64 an eight ounce, etc. The final figure should be retained, as that serves as a denominator, the figure attached to the medicine being the numerator as already explained.—*Maryland Medical Jornnal*, December 1.

A CASE OF OPIUM HABIT OF SIX OR EIGHT YEARS' STANDING, TREATED SUCCESSFULLY WITH THE SOLID EXTRACT OF COCA.

By JOHN Q. WINFIELD, M. D., Broadway, Va.

Early in September last, Mrs. —— applied to me for treatment of an opium habit of six or eight years' standing. At the time of application she was taking of laudnum daily the equivalent of about forty grains of opium. She was a blonde, somewhat above medium height, with a full round figure, aged 24. In May last she married an estimable man, who was then totally ignorant of her unfortunate habit.

Up to her twenty-second year, this lady had never menstruated *per vaginam*, but had monthly vicarious bloody discharges from the rectum, attended with much pain. These discharges were usually preceded and followed by painful and exhausting diarrhœa To relieve her periodical sufferings, she had unadvisedly, I presume, resorted to the use of laudanum, until such use became a fixed habit.

An operation for congenital closure of the external os uteri, by Dr. C. C. Henkle and myself, restored the menstrual function to its proper organs, but did not, of course, relieve the opium habit; hence her return to me as above stated. The attempt extending through twenty days, to cure the case by reliance mainly upon the strength of her own will and the extract of coca in 20-grain doses, four times daily, proved a failure. She was now (Sept. 28th), with her own consent placed in close confinement, and only one trusty attendant, besides her husband and physician, allowed to enter the room. No opium prescribed. Ordered 20 grains, four times daily, of the extract of coca.

Sept. 30.—At bedtime suffering extreme—double vision, want of appetite, nausea, diarrhœa, restlessness, twitchings of the muscles, pain in the back and joints, formication, begs piteously for relief. Prescribed $\frac{3}{8}$ of a grain of morphia, concealed in a mixture of wine, bismuth and catechu. She slept well during the night, and was calm and comparatively free from suffering the following morning; coca continued.

Oct. 2.—Night. Suffering, but not so severely as before. Prescribed $\frac{1}{4}$ grain of morphia, concealed as before, and ordered the coca to be continued. Slept well during the night.

Oct. 9.—Night. Suffering somewhat from diarrhœa, menorrhagia, formication and pains in the back and limbs. Prescribed $\frac{1}{8}$ grain morphia. Slept most of the night.

Oct. 15. Throughout the day calm and free from pain and other disturbances. From this time on to the 18th of October she continued to do well without opium. The coca treatment, however, had been steadily kept up. She was now discharged apparently cured, but advised to continue the coca for awhile in diminished daily doses, along with a tonic of quinine, strychnia and iron.

At this writing, November 19th, she is much improved in health and appearance, and does not seem to have the least desire for opium.—*Va. Med. Monthly*, Dec.

SUCCESSFUL TREATMENT OF A CASE OF PROLAPSUS ANI OF TEN YEARS' STANDING BY HYPODERMIC INJECTIONS OF ERGOTINE.

By ALEX. HARRIS, M. D., Jeffersonton, Culpeper County, Va.

I was requested to visit Mrs. ——, of this county, April 1, 1880. Patient is aged 40 years; is seven months advanced in first pregnacy, and suffering severe pain from a large prolapsus ani—the tumor being the size of a small fœtal head, and so much inflamed and tender, that she has been unable to return it for the last two days.

After the liberal local use of cold, the tumor was returned and a palliative treatment instituted till after recovery from parturition (then two months distant) and its immediate effects.

The history of this case, is that the patient has had prolapsus ani ten years, always produced by defecation, and lately a walk across her chamber has been sufficient to induce it. General health good.

On September 1st, finding that prolapse had occurred at every stool since the birth of her child, now three months old, and that the erect position, maintained for a short time, was capable to produce it, the treatment by ergotine was begun, by injecting g.t. xij of a solution of equal parts of ergotine and water beneath the prolapsed mucous membrance *very slowly*, withdrawing the needle after two or three minutes, and returning the prolapse. The immediate effect of this injection was severe pain in the part, passing off, however, in a few hours, and succeeded by general muscular soreness, which lasted from three to four days. The effect upon the prolapsed bowel was marked. There was no tendency to protrusion except during defecation, and that to less than half the former extent. The injections were repeated at intervals of about four days (the subsidence of "muscular soreness" being the criterion as to interval, the prolapse being induced in constantly decreasing size by straining at stool) until six had been given. After this, the prolapse was not induced by a stool, and the necessity for the ergotine terminated.

It has now been a month since the last injection; the patient has been in active discharge of the duties devolving upon a housekeeper in the country, but has had no return of the malady.

This plan of treatment was suggested to me by a paragraph in *Braithwaite's Retrospect* for March, 1880, which credits Dr. Vidal, through the *Paris Médical*, with three cases of prolapsus ani successfully treated by ergotine hypodermically, as well as the generally received doctrine, at the present day, of the physiological action of ergot upon relaxed tissues.—*Va. Med. Monthly*, Dec.

HELP FOR STAMMERERS.

A contributor to *Chambers' Journal*, who according to his own assertion was a most habitual, unmistakable and inveterate stammerer, gives his theory with regard to the production of what might be termed this vocal deformity, and details the method by which he effected a cure.

After having his life "thoroughly embittered by this malady" for about thirty years, he met with an article on the subject by Dr. Arnott, in which it was suggested that, since consonants are the stammerer's deadly enemies, the prefixing of the sound of *e*, as in the French words *de*, *le*, *me*, *se*, to all words beginning with a consonant, would prove an unfailing remedy. This plan was tried with some benefit, but something more was required for words with consonant initials in the middle of a sentence, as well as for syllables with consonant initials, in the middle of a word. As to *w*, *y* and *u* as initials, they seemed to present insurmountable difficulties.

After considering the subject still further, he decided that, as consonants at the beginning of a word are so very troublesome, if a method could be devised for bringing them to the end of a division instead of the commencement, a great object would be attained. Once the glottis being opened by a vowel-sound, the consonant would follow. The aim of the stammerer is to prevent the glottis from closing when once it is opened.

As a further step in the development of this plan, sentences were written out in the ordinary way, and then rewritten, so that the initial consonant became the final letter of the preceding word. The sentences thus constructed were then read over and over, until in a few weeks the improvement was extraordinary.

Before entering upon a trial of the method which proved so satisfactory in the case under consideration, it must be understood that the stammerer should speak slowly and with affected ease, allowing the words to *flow* out rather than to deliver them with a jerk. Besides, when it is recommended to prefix the French sound, of *e*, as in *le*, *de*, *me*, *se*, it is not intended that this sound should be conspicuous, but used rather as a glottis-opener, making way for the advancing consonant. Further, the statement which is sometimes made, that no stammerer ever experiences any difficulty in the enunciation of vowel-sounds, is not true, for *w*, *u*, and *y* are, as initials, often decided *pièces de résistance*.

Now to illustrate the proposed plan. In the enunciation of such words as have consonant or compound consonant initials like *br*, *pr*, *dr*, *st*, *sl*, the prefix of *e* will be an amply sufficient aid. Under this head would come such sentences as, "*M*y friend who has just spoken;" "*B*ut there is a fatality;" "*N*ow all that has to be changed;" "*T*hat showed the power;" *N*umbers, *D*euteronomy, *S*cotland, *S*pain. Some of these words

would often prove very embarrassing to a stammerer without extra help.

In case one or more words beginning with consonants occupied the body of a sentence, the sentence should be so constructed as to make the initial consonants come at the end of a division. The sentence, "May he rest in peace," would then become "Im-ay heer-est inp eace," and this should be read aloud many times, studying to make it sound like the original. Such a division is not necessary for every sentence, but only where an obstacle presents, and this can usually be anticipated. Besides, when one formidable word has yielded, a host of others will follow suit. The well-known sentence, "I came, I saw, I conquered," becomes "Ic-ame, Is-aw, Ic-onquored."

Where *w* stands as initial, the sound of *oo* as in moon should be used; for *y*, the sound of *ee* is called in; and for *u*, the sound of *ee* followed by the sound of *oo*. Certain words, such as universe=eeooniverse, unanimous=eeoonanimous, usual=eeoosual, should be written out and repeated aloud as before. The substitution of the equivalent sounds for *w*, *y*, and *u* is said to afford a relief almost incredible, but care must be taken not to *dwell* on these substitutions, but pronounce them nearly as one syllable. Practice is of course always necessary.

In conclusion, the writer adds that the benefit of this system has not been confined to himself alone, and Canon Kingsley, in gratefully acknowledging these hints on the cure of stammering, said: "For the torments I have suffered since I was six years old, God alone knows, or will know; still to me every stammerer is a friend at once by unity of sorrow—after all, perhaps the most sacred unity on earth."—*N. Y. Med. Rec.*, Jan.

POTENTIZATION GIVING WAY.

We copy with much satisfaction the following passages from the remarks of Dr. H. Paine, Secretary of the Homœopathic Medical Society of Northern New York. They were made at the late annual meeting, and are found in the New York *Homœopathic Times* for November, 1880. The abandonment of the idea of potentization, which is really the most obnoxious feature of the system, would be a long stride towards reason and common sense:

The Milwaukee test has very conclusively demonstrated that high potencies have no disease-producing power. The vast accumulations of chimerical provings which have made our school a reproach and a by-word, were swept away with cyclonic effectiveness, thanks to the firmness and sound judgment of the projectors of that well-directed and successful experiment. Henceforth we shall hear little and see less of these visionary provings, except by accredited candidates for a lunatic asylum.

Moreover, it is perfectly plain to every unprejudiced person, that this very satisfactory result would never have been reached by individual experiences, however numerous and prolonged. It was obtained *only* by thoroughly organized and well directed effort, put forth by a competent corps of observers. The effect was sharp, short and decisive.

Now let our school, by means of its more important organizations, institute properly conducted series of trials for the purpose of ascertaining as definitely as may be possible, the practical curative value of the use of high potencies in the treatment of disease, from the standpoint of homœopathy. We can then determine whether these probably fictitious remedies possess disease-controlling qualities, such as, from a homœopathic point of view, to warrant their use with reasonably uniform success.

It might also be confidently expected that the proposed trials would throw light on the law of potencies, provided one exists, whereby the proper potency may be appropriately selected in any given case.

Our experience in the use of high potencies is based, as Hahnemann's was, on theoretical grounds only. It is one of the most singular forms of idealism ever seriously entertained by the medical profession. I firmly believe that when our reputed cures are reported in connection with all the cases treated, we shall find that their frequency is not greater than those of daily occurrence without the intervention of medicine of any kind.

It is my purpose, in calling attention to this important subject, to point out to the younger members of our school, the extremely unreliable nature of the evidence, from a homœopathic point of view, uniformly adduced in support of the use of high potencies.—*Pacific Medical and Surgical Journal*, January.

STRANGULATED HERNIA RELIEVED BY TEARING OR STRETCHING THE ABDOMINAL RINGS.

By J. W. YOUNG, M. D., of Bloomfield, Iowa.

On the morning of September 10, 1879, I was called ten miles in the country in consultation with Dr. Edwards, to see Mr. J. M., aged 56, suffering with strangulated hernia, and requested to bring the necessary instruments to open the sac and return the contents. I arrived fifteen hours after strangulation, and found patient resting under a huge dose of morphia. Dr. Edwards stated that strangulation had occurred several times during the last 25 years, but that the patient and friends had succeeded in returning the hernia without surgical aid. Trial was made for two or three hours by the patient without success, and Dr. Edwards was called. Patient was placed on an inclined plane and taxis tried at different times by the doctor, for several hours, but finally the doctor and friends became

discouraged and a messenger was dispatched for me, and a large dose of morphia was given the patient, to relieve the horrible suffering till my arrival.

Upon examining the case I found a large inguinal tumor extending into the scrotum, tense and inelastic to the touch. I arranged the instruments on the table I should be likely to use in cutting the stricture, if I should be compelled to resort to this bloody treatment, but determined, if possible, to try in this case a theory I have of tearing the stricture, instead of cutting. The patient was placed on a board about five feet long, with head supported by a pillow. Half the board was on the bed and the head end was supported by a chair. Complete anæsthesia was made by chloroform, and the chair taken from under the head end of the board and the head lowered to the floor, while an assistant stood on the bed and held the legs over the end of the board. I dragged the abdomidal viscera as near the diaphragm as possible, and tried to reduce by taxis for some time, but the tumor seemed immovable. I then invaginated my index finger in the scrotum, gradually forcing it along the tumor till I could feel the stricture. Dr. Edwards kept up complete anæsthesia of the patient. Everything was relaxed as much as could be, and my patient completely insensible. I forced my index finger under the structures surrounding the neck of the tumor, little by little, till the first point rested under the perplexing bands. I now, by sheer force, pulled upward and inward till I felt the tissue tear over my finger. I dilated the ring in this manner as much as I thought proper, and then without trouble or delay returned into the abdominal cavity the relaxing tumor.

A bandage and pad was applied over the abdominal rings, to prevent a protrusion from coughing, sneezing, etc., and patient placed comfortably in bed, by which time he had partially recovered from the effects of the chloroform.

I left the case in the hands of Dr. Edwards, directing him to keep the patient quiet, apply turpentine over the bowels, and combat inflammatory symptoms as they should come up. The patient was kept in bed four days, with but little nourishment, and somewhat under the influence of opium, and was allowed after this to get up and walk about a little. Complained of great soreness over the inguinal region, but no great constitutional symptoms followed, and was able in about ten days to go about the farm.

I do not claim this treatment is applicable to all cases of strangulated hernia. It could not be employed in femoral hernia, and if gangrene had taken place it would be bad practice to return a gangrenous gut into the abdominal cavity; yet I claim in the above case it was the best possible treatment. There was no danger of wounding the epigastric artery; the peritoneum was not exposed; the dangers of inflammation greatly reduced; and the chances are favorable to a speedy radical cure of the hernia by adhesive inflammation.

I do not remember having seen or heard this tearing method recommended, and I report this case and its treatment for the purpose of eliciting criticism from the profession in the *Reporter. Medical and Surgical Reporter*, October 18.

THE INFLUENCE OF HIGH ALTITUDE ON SEXUAL APPETITE, SLEEP AND RESPIRATION.

Dr. W. P. Shoemaker, of this city, writes: "Among the many peculiarities of high altitudes, not the least interesting is the loss of sexual desire, and often of sexual power, experienced by those who ascend the mountains. Especially is this so of Colorado. The effect is not universal, but it is the rule, and I am inclined to think that all feel the effect to a certain extent. A man may live for years there, and never, either sleeping or waking, will he have the least sexual desire. I have known men to go to houses of prostitution by force of habit, and not even the combined influence of wine and women could arouse his dormant passion. But others have the ability or power, yet lack the desire, unless brought in close proximity to the exciting cause. I have known men whose thoughts by day and whose dreams by night were lust when in a low altitude, to lose all desire immediately on ascending the mountain, and have a return of the trouble as soon as they descended. I will not attempt any explanation of this anaphrodisiac property. This influence is confined to men, and it has even a reverse effect on women, which makes an explanation more difficult than if the influence were general. The natives have a superstition there that it is due to the waters of a certain stream, the crossing of which renders him who has the audacity to invade their country impotent; and they give this stream a name which is significant of its supposed function. Is it not a rational presumption to hope that this feature of the climate might be utilized in the treatment of certain nervous affections which have their origin in a diseased condition of the sexual organs?

"The soporific quality of the atmosphere is another peculiarity of the climate. This quality is very different from the drowsy, languid feeling which a sea air produces during the day. The sleep is simply deeper, more profound, and about two hours longer. You go to bed at your usual hour, and neither noise nor light will awake you, perhaps until 10, A. M. This is a pretty general effect upon the "tenderfoot," as they call visitors. I have seen great relief given to patients suffering from hyperæmia of the brain and the sleeplessness which attends that condition so generally; but I am sorry to say that the benefit afforded these cases is not permanent, but a return of the symptoms present themselves as soon as the patient returns to the low altitude. I might say that it is not necessary for a patient to go to a great elevation to experience this effect. Colorado Springs is sufficiently high to produce it,

but to a less marked degree than the higher localities. A sense of exhaustion is felt on the least exercise, and this appears to be due to a lack of oxygen in the system. Until the auxiliary respiratory muscles have learned to perform their duty perfectly, the lungs cannot inhale sufficient air to keep up the demand for oxygen. In a few days the auxiliary respiratory muscles become sore, just as any other muscles will do when first they perform their functions. The respirations are increased in number, and the pulse is increased in rapidity and force, but the temperature remains the same. Frequently blood will be expectorated from the mucous membranes of the organs of respiration, the skin becomes dry, and the lips chap. The latter are due to the dryness of the air. It is not difficult for us to see that this would be a good place for the man who has a cavity, a hemorrhage, or any solidification to come from; but it is difficult for us to see what class of patients it would benefit who have lung trouble. Certainly not bronchitis, for it will produce that in a healthy lung. It would be death to a man suffering from emphysema, or any form of lung trouble which had its cause in cardiac disease, for the heart becomes an uncontrollable organ under these conditions. As a prophylatic to consumption, I think nothing could be more desirable.

"So thoroughly and forcibly opening up the alveoli, it will prevent the accumulation of epithelial cells, fibrinous exudations, and leucocytes within the alveoli and bronchioles; or it may even help to clear out these accumulations before there is any thickening of the walls of the terminal bronchioles or an increase of interlobular connective tissue. But in the advanced stages of phthisis, nothing could be more irrational than to expect benefit from that climate. Always remember although the chemist may tell you that there is a greater per cent. of oxygen in that atmosphere, that owing to its less density, there is very much less in a cubic foot than in our own climate."—*New York Medical Record*, January 1.

SYPHILIS IN JAPAN.

Previous to 1869 the percentage of cases admitted to hospital for syphilis in Yokohama, was 24.4; in that year legal preventive measures were enforced, and since then the admissions have been reduced to about 11 per cent. The Japs approve of preventing this disease by legal sanitary measures; so do the French, English and Germans. The Utah Indians, Hottentots and citizens of the United States do not; they think it would interfere with the liberty of the individual, or else would be immoral.—*Med. and Surg. Rep.*, Oct. 18.

A Michigan chiropodist offers to chirop with any man for $100 a side. If beaten he will acknowledge the corn.—*Ex.*

THE USES OF IODOFORM.

By H. C. HOWARD, M. D., Champaign, Ill.

The value of iodoform as a topical application has been before the profession for a considerable time, but I am convinced that it is not even yet appreciated by the majority, who have a rather indefinite idea that it is useful, and a very imperfect notion of the extent and scope of its usefulness. My own experience with this agent has been so satisfactory, that I have come gradually to look upon it as the very best at our command for the healing of ulcerated, eroded, granulated and abraded surfaces, which have for any reason too little inclination to take on healthy action, and which, therefore, require some alterative or stimulative impetus. I shall, therefore, designate in a few words some of the conditions in which I have found it useful.

Chancre and Chancroid.

Take iodoform 100 parts, sugar of milk 200 parts, thymol 1 part. Let the above be thoroughly mixed and reduced to an impalpable powder. The glands and prepuce must be thoroughly clean and dry. Then pack the ulcerated surfaces full with this powder, dust it over the surrounding parts, and secure it with a light bandage. Repeat the application as often as the parts become moist from new discharges. Ordinarily, about three applications will be required every day, for the first two or three days then as healing continues, they may be repeated less frequently. A fair trial of this method, I am certain, will convince any one of its superiority.

Herpes Cincinata, Herpes Zoster, and Herpes of the Prepuce.

Dissolve one dram of iodoform in one-half ounce of the oil of eucalyptus, and paint the diseased surface with this solution. Two or three applications will usually affect a cure.

Granulated Lids.

Apply iodoform and sugar of milk, one part to five parts, directly to the everted lids with a soft brush. This occasions no smarting or pain, and often cures cases of months' standing in two or three weeks. The thymol should not be used in these cases, as it irritates and produces pain.

Granular Pharyngitis.

The same powder as indicated for chancre and chancroid may here be employed with an insufflator, thoroughly, at bedtime. The most obstinate cases will often yield promptly to this course.

Chronic Ulcers of the Leg, Cracked Nipples, and all Kinds of Indolent Ulcers with Raised Edges.

Prepare an ointment containing one-half dram of iodoform in an ounce of cosmoline, and apply frequently, after having previously thoroughly cleansed the parts. The well-known and popular addition of the balsam Peru to this ointment masks the odor and adds to its value. I would add that the above is an auxiliary, not a substitute, for the ordinary methods of applying pressure, such as strapping and bandaging, which should not be omitted.

Uterine Catarrh.

For uterine catarrh, or, as it is improperly called, endometritis,—I refer to those cases in which there is congestion, and a consequent discharge, with some enlargement and an erosion extending up into the canal—I employed a suppository which is made and applied in the following manner: Mix one-half dram of finely powdered iodoform with one ounce of the butter of cocoa. This may be kept in a shallow ointment jar. I have a thin silver tube about one-fifth inch in diameter, with a closely fitting piston. This tube is about eight inches long. When a suppository is needed, I retract the plunger or piston to a point from the distal extremity of the tube, corresponding to the length of the required suppository. Then fill the lower open end of the tube by plunging it again and again forcibly into the jar containing the material for the suppository, and packing it solid by downward pressure of the piston. Then I apply the suppository by passing the end of the tube into the cervical canal and force it out by pushing in the piston. The suppository will then be in the desired place. Five grams of the iodoform may be used at a time. Unlike the gelatine pencils of iodoform, which are so widely advertised, this melts and takes effect at once, and causes no pain.

Fissure of the Female Urethra.

This troublesome and intractable ailment yields promptly to the use of the same suppository which I have advised for uterine catarrh. Their use is commonly followed by the disappearance of those symptoms which are always associated with fissure of the urethra, and which so often lead to the false diagnosis of cystitis.

Gonorrhœa in the Male.

The same suppository, made in the same manner, and applied with the same instrument, may here be advantageously employed, care being taken to pass the suppository above the inflamed part. This treatment of gonorrhœa I have used for nearly two years, and can testify to its great efficacy. It is a suitable substitute for injections, and is more sure in its effects. The application should always be made by the doctor when possible. I have been pleased to see that Mr. W. Watson

Cheyne, in a late number of the British Medical Journal, contributes a very definite testimonial to the value of urethral suppositories, or pencils, in the antiseptic treatment of gonorrhœa. I would, however, give the preference to the method of preparation and application which I have here described, as being simpler and, perhaps, more effectual than his. It must be remembered that the popular addition of balsam Peru in these suppositories is objectionable, by reason of its irritating qualities.—*Chicago Med. Rev.*, Nov. 20.

"ST. VIRCHOW'S WELL."

That the great pathologist and opponent of dogmatic belief should himself become a miracle worker is a funny satire. Yet such is the fact. When he went, last spring, to look at Dr. Schliemann's diggings at old Troy, the rumor soon spread that he was a renowned healer of disease. Consequently, sick and infirm people flocked in daily increasing numbers to Hissarlik, from far and wide. There are no roads and no vehicles. So the people came on foot, or on horseback, or riding on asses; even women coming thus from a long distance. Very infirm people were brought in great baskets slung across a horse's back, sometimes one on each side, by way of balance. The patients used to range themselves in a long row, opposite the wooden hut in which Virchow lodged, each waiting patiently until his or her turn came.

But the joke remains to be told. While there Virchow had a well dug in the old bed of a stream, now dry, to obtain good water. Since he left, Dr. Schliemann writes that the inhabitants "regard the excavation and spring with veneration, and have fenced it around with stones. The spring is called the 'doctor's well,' and magical virtue is ascribed to it. Every one comes to draw water from it.—*Medical and Surgical Report*, October.

Editorial Department.

The recent inundation of a considerable part of New Orleans by a storm tide from Lake Pontchartrain has excited the customary fears and predictions of impending sickness. The teachings of such inundations do not prove that they have exerted any influence upon the occurrence or mortality of yellow fever outbreaks. Dr. Bennet Dowler makes the following statements supporting the above allegation:

"In 1816, early in May, the inundation of the rear of the city took place from the Macarty crevasse, now the site of Carroll-

ton, nine miles above the city. The water in the houses and streets had a depth of three or four feet. On the third of the same month, in 1849, the great Sauvé crevasse, 18 or 20 miles above the city, took place, by which two or three hundred squares and several thousand tenements of New Orleans were submerged for nearly two months.

The year 1816 was healthful; the year 1849, during and after the inundation, was generally reckoned as a non-epidemic year, notwithstanding the prevalence of a mild epidemic of yellow fever.

The three following years were without yellow fever epidemics. An expounder of epidemic ætiology not very scrupulous in his logic might argue that the great inundation of 1849 was the forerunner or cause of an unusually long exemption from yellow fever anterior to 1853,"—N. O. MED. AND SURG. JOUR., 1858.

Since 1849, New Orleans has suffered from inundations in 1868, 1869, 1871 and 1881. Three of these were from storm-tides, and the other—that of 1871—from a break in the "new canal" and a conjoined storm tide. Sanitarians of the present day are driven by the logic of facts to support the position taken by Dr. Dowler, in so far as it relates to any causal connection between these inundations and yellow fever. We would certainly expect malarial fevers to be increased in numbers and violence of attacks, provided the periods and conditions of any particular inundation furnished that combination of circumstances which favor the development of the swamp poison—such, for instance, as suitable temperature, moisture and a proper pabulum, or soil. We might even go beyond this formation of expectations, and say that if the inundation was from salt, or brackish water, the condition of suitable pabulum would be so much exaggerated, that more intense development of swamp poison should follow an inundation from lake water than from river water. But further observations are required before the actual effects of previous inundations upon the prevalence of malarial fevers can be determined. Let us make carefully recorded observations during the coming summer, in order to ascertain what may prove to be its lessons. But those of us who live in New Orleans recognize the great difficulty in endeavoring to estimate the degree of mischief the late inundation is likely to inflict upon the health

of the city, when they every day behold the street contractors digging the filthy mud from gutters, which for months have been filled with the contents of overflowed privies, and with refuse garbage, and dumping it generally over the streets, to fill depressions, and at the same time to load the atmosphere with disgusting and sickening smells.

State Medical Association.—We hope our readers will not forget that this body will meet in New Orleans on the 30th day of March. We trust that a large attendance will be secured.

Ziemmsen's Cyclopedia of the Practice of Medicine. The 13th volume of this great work has been received, and will have a more extended notice in our next issue. In the meantime, it may be ordered through Armand Hawkins, 196½ Canal Street, New Orleans.

Reviews and Book Notices.

A Manual For The Practice of Surgery. By Thomas Bryant, F. R. C. S., Surgeon to and Lecturer on Surgery at Guy's Hospital, etc. Third American from the third revised and enlarged English edition. Edited and enlarged for the use of the American student and practitioner, by John B. Roberts, M. D., Lecturer on Anatomy and on Operative Surgery in the Philadelphia School of Anatomy, etc. With 735 illustrations. Royal 8 vo. Pp. 1005. Philadelphia: Henry C. Lea's Son & Co. 1881. [Sold by Armand Hawkins, 196½ Canal street, New Orleans. [Price, in half Russia binding, $8 00.]

The first English edition of this work was published in 1872, the second in March, 1876, and the third in December, 1878; each one being followed by an issue in this country. A great part of the present edition was re-written by the author, and 88 new wood-cuts were added. All this matter has been retained by the American editor, who has inserted numerous additions in brackets, based mostly on the experience of American surgeons, and also 63 more wood-cuts. Here it is convenient to remark that the abundance of illustrations in this book constitutes a very valuable feature, particularly as regards instruments and operations.

The scope of this treatise is quite complete, including those

portions of surgery which the gynæcologists and ophthalmologists have erected into specialities; hence the author is necessarily concise, though he often quotes from other authorities, including American surgeons. After a short introductory chapter, devoted chiefly to examination of cases, he devotes a few pages to repair and inflammation, and then proceeds to the consideration of special surgical subjects, without dwelling upon pathology.

It is unnecessary to present any thing like a complete analysis of a work so well-known as this, consequently we shall select only a few points for special notice.

On the subject of cancerous tumors, he remarks: "Pathologically, a cancerous tumor is *not* composed of any definite or characteristic elements, such as at once stamp it as being a cancer. It does not contain any distinct cancer cells which mark its nature, as the cells, nuclei and fibres which enter into the formation of a cancer, may all be traced in other and in innocent morbid growths. * * It does not appear, however, to be incorrect to assert, that the more cell elements predominate in a growth, and the more they approach an epithelial type, the greater is the probability of its being malignant, and therefore cancerous. * * If a tumor be found in a part, *infiltrating the tissues* with which it is in contact, there can be little if any doubt of its being a cancer, for no innocent growth infiltrates tissues—it only separtes them. * * A cancerous tumor, however, does not always infiltrate a part, although an infiltrating tumor is almost always a cancerous one." It is therefore apparent that he does not attribute any specific character to cancerous structure, although he mentions the usually recognizad traits of implication of the lymphatic glands, of secondary growth in other parts, and of liability to recurrence after removal—all of which indicate a general affection of the system.

In regard to hereditary influence as a cause of cancer, he regards it as no more efficient than it is in benign tumors and deformities, and cancer as no more hereditary than any other disease. At the same time, he remarks that the prevailing opinion has been the other way. The numercial method of investigating the question would seem to promise something like accurate results, but the author shows that, while Sir James Paget found hereditary precedent once in three cases, he himself found it only once in ten cases. Evidently the *personal*

equation of different observers first needs resolving, and the extraction of its roots will be found a complicated problem.

With regard to operating for the radical cure of hernia, the author approves it only when the hernia cannot be kept up with a truss, inasmuch as there is always some danger in the procedure, and the truss cannot be dispensed with subsequently. The only exception would be in case of removal to a region where trusses could not conveniently be obtained. The American editor remarks that the general opinion of our surgeons is adverse to the operation.

As to the unity or duality of venereal sores, the author is not explicit, but rather equivocal, with a leaning to the unity of the poison, as may be seen from the following. "In by far the larger number of cases, this disease begins and ends as a local affection: in a smaller it is a local inoculation of a constitutional disease, and is followed by syphilis. * * * So long as the disease is local, it is comparatively unimportant, however extensive and troublesome it may be in healing. But whenever it is the local inoculation of a constitutional affection such as syphilis, it is of grave importance, however apparently trivial may be the local sore. * * * The action of the sore may vary with the condition of the patient, as well as with the condition of the part upon which it is placed, and it will be influenced probably by the nature or stage of the infecting sore from which the disease has been communicated. * * * When a chancre is sloughing or phagedænic from the first, and has originated from an inoculation of syphilitic matter, there is every reason to believe that the sloughing process may have a beneficial tendency, since the very intensity of the local effects of the poison may be the means of preventing the absorption, and thus the outbreak of syphilis. When, however, the sloughing action appears during the ulcerating or later period of the chancre's progress, it will have no such useful influence: for when syphilis is inoculated through a chancre, it is during the vesicular, papular or pustular condition, prior to its ulcerative stage, and no action of the sore that appears after this period can have any effect in checking the diffusion of the poison."

After recommending the early destruction of chancres by caustics, with the view of preventing syphilitic infection, he adds—"When, however, the sore exists as an ulcer, this abortive practice is useless; indeed in the majority of cases it makes a small sore large, retards recovery, and in no way prevents syphilitic symptoms appearing where the chancre has

had a syphilitic origin. But, taking all together, not one chancre out of four has a syphilitic origin."

The above quotations seem to us obscure and unsatisfactory. But since most surgeons now withhold mercurials and other alteratives until the appearance of constitutional symptoms, less harm results from divergence in theory about the nature of venereal sores, since all are treated only locally on their apparent merits.

The American editor, without declaring his own opinion on the numerical question, remarks that the majority of syphilographers at present believe in the duality of these sores, and this theory, in our opinion, accounts more satisfactorily for all the facts observed.

Of the work as a whole, we feel bound to speak quite favorably, as being trustworthy and more convenient for students and general practitioners than the larger ones in two or more volumes. Its practical merits commend it sufficiently to compensate for any deficiencies in the pathological features.

S. S. H.

Photographic Illustrations of Cutaneous Syphilis.—By George Henry Fox, A. M., M. D., Clin. Lecturer on Dis. of Skin, Col. Phys. and Surg., N. Y., etc 4to. New York: E. B. Treat. 1880.

The fourth, fifth and sixth parts of this splendidly illustrated work are before us, of which the following are the contents:

No. 4.—Syphiloderma papulosum et pustulosum;
Syphiloderma pustulosum;
Syphiloderma pustulosum corymbiforme;
Onychia syphilitica.

No. 5.—Syphiloderma papulosum humidum;
Syphiloderma papulo-squamosum;
Syphiloderma papulo-squamosum;
Hydroa pemphigus iris.

No. 6.—Eczema squamosum;
Syphiloderma squamosum circinatum;
Syphiloderma tuberculosum ulcerativum;
Syphiloderma squamosum gyratum;
Syphiloderma squamosum circinatum;
Syphiloderma tuberculosum.

Drainage For Health, or Easy Lessons in Sanitary Science. By Joseph Wilson, M. D., Medical Director, U. S. Navy. 8 vo. Pp. 68. Philadelphia: Presley Blakiston. 1881. [Sold by Armand Hawkins, 196½ Canal street, New Orleans. Price, muslin, $1 00.]

This little work is divided into four chapters, on the following subjects: I. Land Drainage; II. Drainage of the Farmhouse and Village, III. The Drainage of Cities; IV. Something About Plumbing.

In the first chapter the author's explanation of the sanitary advantages of drainage of the soil is certainly ingenious. "The moist re, much or little, stagnating in the soil, poisons vegetation. It has been suggested that the plants secrete poisons into the soil—a poisonous excrement—which, unless removed by percolating water, poisons the plants themselves; and this is perhaps the only explanation that has been offered." It was not the explanation offered by Mitchell and Saulsbnry a good many years ago, and quite recently by Klebs and Tomassini, who have all supposed that they had discovered the particular organisms which produce periodical fevers. But, without subsoil drainage or percolation, grounds in cultivation gradually dry by surface evaporation, and lose their malarious character. What, then, becomes of the "poisonous excrement"?

On p. 13 he goes a little too far, in saying that the inhabitants, their houses and their crops, in malarious localities, are all poor. Malarious lands are generally productive of large and profitable crops; otherwise their occupants never would risk their health and lives by dwelling on them.

The following explanation of the salubrious influence of pine growth of timber is ingenious, and probably original: "It seems to me that the pine trees act principally by draining the land, and this they do by the peculiar manner in which the roots decay. When the treas of the forest get to thick to thrive, the weaker ones die out and decay, not and branch; but the roots decay much more rapidly and more completely; thus the whole situation of the pine stump becomes a very effective sink. The roots near the surface form a series of collecting drains, and deep roots are distributing channels by which the water rapidly sinks to its lowest level." The truth

is, pine timber grows on a soil naturally light and porous. Besides, the roots of the resinous varieties of the pine, which are most common, decay very slowly.

In the last chapter, p. 55, another novel theory is broached. The author attributes the anæsthetic form of leprosy to obstructions of the arterioles by bacteria. It is not stated that the bacteria have actually been discovered in the tissues of lepers, nor is any proof of the assertion offered. The reader must therefore judge for himself how much salt is needed to qualify the statement.

It is to be regretted that a subject of such intrinsic importance and interest should be loaded with these theories, which can add nothing to its merits. Much of the limited space of the book is occupied with quotations and gossippy matter in a trivial style, which might serve for light reading to a vacant mind, but would hardly satisfy a busy and serious man.

S. S. H.

An Elementary Treatise on Practical Chemistry and Qualitative Inorganic Analysis, specially adapted for use in the Laboratories of Colleges and Schools, and by beginners. By Frank Clowes, D. Sc., Lond., Fellow of the Chemical Societies of London and Berlin, Senior Science Master at the High School, Newcastle-under-Lynne, etc. With illustrations. From the third English edition. 12 mo. Pp. 372. Philadelphia: Henry C. Lea's Son & Co. 1881. [Sold by Armand Hawkins, 196½ Canal street, New Orleans. Price, in muslin, $2 50.]

This work was prepared by a teacher for the use of his own classes, and was designed to serve in the place of constant supervision by an instructor. The explanations are ample and minute enough to meet the needs of less advanced students, though an elementary knowledge of the chemistry of inorganic substances is a prerequisite.

Some appendices to the volume contain matter not usually found in works of this kind, such as directions for the analysis of rare metals and a description of the spectrum analysis.

The work is well adapted to the use of those medical students, who desire to apply themselves to practical chemistry in the laboratory. S. S. H.

Medical Diagnosis with Special Reference to Practical Medicine. A Guide to the Knowledge and Discrimination of Diseases. By J. M. Da Costa, M. D., Prof. Pract. Med. and Clin. Med., Jeff. Med. Col. Phila., etc. Illustrated with engravings on wood. Fifth edition, revised. 8 vo. Pp. 924. Philadelphia: J. B. Lippincott & Co. 1881. [Sold by Armand Hawkins, 196½ Canal St., N. Orleans. Price in muslin, $6.00.]

The first edition of this work was published in 1864, and the fourth in 1876. The present edition has been condensed in some parts and expanded in others, containing nearly 100 more pages than the previous one, together with several new illustrations. The author has aimed to keep pace with the advance of medical science, and has found it necessary to introduce new matter, particularly in the chapters on the Nervous System and the Blood.

Dr. Da Costa's book has already done great credit to American medicine, and becomə a standard authority in the English-speaking portions of the world, and we now observe that a translation into German is in course of publication.

S. S. H.

Fever: A Study in Morbid and Normal Physiology. By H. C. Wood, A. M., M. D., late Prof. Botany, and now Prof. Mat. Med. and Ther. and Clin. Prof. Diseases of the Nerv. System., Univ. Pa., etc. 4to. Pp. 258. Philadelphia: J. B. Lippincott & Co. 1880. [Sold by Armand Hawkins, 196½ Canal St., N. Orleans. Price $2.50.]

This work constituted No. 357 of the "Contributions to Knowledge," published by the Smithsonia › Institution, and is reprinted from the original stereotype plates. For many years the author was engaged in preparing the materials of which it is composed, and was compelled in some degree to change its plan, in consequence of the death of Dr. Horace Hare, who was to have undertaken the chemical part of the research. He was later deprived of the services of Dr. Lautenbach, who assisted in the physiological experiments.

The four chapters treat respectively of (1) The Essential symptoms of Fever; (2) Concerning the methods by which the Animal Organism controls the Production and Dissipation of Heat; (3) The Thermic Phenomena of Fever; (4) The Theory

of Fever. The principal symptoms are stated to be disturbances of the circulatory and nervous systems, of nutrition and secretion, and increased bodily temperature. The last alone is regarded as essential, since it produces the others, and the same cannot be said of any of the rest. Experiments with dogs, cats and rabbits in heated boxes produced abnormalties of innervation and of the circulation akin to sunstroke, when the temperature was raised to 120° or 130°, F. Other experiments were made by heating the brain of animals to from 113° to 117°, by means of a current of hot water passing through a rubber bonnet enveloping the head. The results were uniformly fatal in a short time by arrest of respiration, preceded by convulsions, insensibility and exceedinly rapid action of the heart, unless refrigeration were produced in season. Rapid relief was offorded by affuson of cold water.

Another series of experiments consisted in division of the spinal cord at different points, and observing the effect on animal temperature. The conclusion reached is, that "section of the cord is always followed by a decided increase in the animal heat, and that the amount of the increase is in direct proportion to the nearness of the section to the brain, provided respiration be not seriously interfered with." These latter experiments convinced the author "that the chief governing voso-motor centre is placed in the lower portion of the fourth ventricle near the point of the calamus." Division of the upper portion of the medulla oblongata was followed by rise of the temperature generally in dogs, but rarely in rabbits. The explanation is, that the pressure of a blood-clot upon the floor of the fourth ventricle, generally in the rabbits, and sometimes in dogs, causes vos-omotor paralysis; in which case fall of temperature is observed.

Other experiments were made on the brain-substance of animals by the injection of irritating liquids, and by mechanical violence, and the conclusion reached was, that "destruction of the first cerebal convolution in the dog posterior to and in the vicinity of the sulcus cruciatus is followed at once by a decided increase of heat production, whilst after irritation of the same nervous tract there is a decided decrease of heat pro-

duction." His supposition is, that the calorific centres are located in the pons varolii, and that the first convolution shares the function from habitual co-action. Cerebral localization of function is rationally regarded by Prof. Wood as a differentiation progressively effected in animal life, in the course of evolution from lower to higher forms. In the lowest forms all the functions must be performed in the primordial cell; while, as cells are multiplied, organs are developed with differentiated functions. Whether differentiation extends to the cerebral convolutions is still an open question, though many regard it as settled that the faculty of speech in mankind has been accurately located.

Experiments on animals with the calomineter demonstrated the production of heat in a much higher degree when they were fully fed than when they were fasting. In fever, with abstinence from food, elevation of temperature must be attributed to increased oxydation of the tissues, together with diminished dissipation of heat through checking of insensible perspiration and warm covering in bed.

As to the origin of the febrile action, whether hæmic or neurotic, while he maintains that it is generally due to the absorption of some poison into the blood, yet he supposes that it is produced by the action of the poison upon the central nervous system—hence fever is a neurosis.

This work is a real and valuable contribution to science. The 121 experiments, which are systematically and copiously recorded, were evidently performed in a faithful manner and carefully studied. Though most of the conclusions had been previously reached by other experimenters, it is a great gain to have them confirmed and put into shape convenient for reference. The addition of an alphabetical index to the volume would be an advantage in this regard.

The book is sure to provoke the condemnation of pietists and sentimentalists, inasmuch as the experiments were necessarily made upon living animals without anæsthesia. The same individuals, without scruple, will hunt animals to death, or failing in their object, leave them tortured with wounds. That is heathy and innocent sport! But when the student of

science proposes to enlarge the boundaries of knowledge, for the cure or prevention of disease, by experimenting upon the normal or morbid functions of the living economy, his work is stigmatized as cruelty to animals, and the strong arm of the law is invoked to forbid the impious act. There is reason to believe, however, that such opposition will cease at no distant day among intelligent and reasonable people. Not many generations ago the pursuit of studies in human anatomy was criminal and infamous, and opposition has not even yet ceased among the ignorant. Many now living are able to observe a great change in public sentiment and in legislation on this subject. Gradually people are finding that utility is compatible with morality, and eventually it must be admitted that utility, in its broadest sense, is the true standard of conduct.

S. S. H.

Books and Pamphlets Received.

Some Clinical Considerations on Access to Benign Intra-Laryngeal Neoplasms through External Incisions; as Illustrated in a Small Group of Personal Observations heretofore unreported. By J. Solis Cohen, M. D., Philadelphia, Pa. Reprint from Archives of Laryngology, Vol. 1, June, 1880.

Some Remarkson Tuberculous Laryngitis, as Viewed Laryngoscopically. By J. Solis Cohen, M. D., Philadelphia.

Hyperdistention of the Air-Cells as a Therapeutic Measure. By J. Solis Cohen, M. D., Philadelphia.

Hyper-Distention of the Pulmonary Alveoli as a Therapeutic Agent in Chronic Disease of the Respiratory Mucous Membrane. By J. Solis Cohen, M. D., Philadelphia. Reprint from the Medical and Surgical Reporter.

The Strong Galvanic Current in the Treatment of Sciatica. The Results in Thirty-two Cases. By V. P. Gibney, A. M., M. D., New York. Extracted from the Transactions of the American Medical Association.

Purposes of the Civil Service Reform Association.

Annual Announcement of the Courses of Lectures Delivered in the Philadelphia School of Anatomy.

A Case of Combined Intrauterine and Abdominal Twin Pregnancy: the first child born naturally at eight months, the second delivered alive at term by Laparotomy. By H. P. C. Wilson, M. D., President of the Medical and Chirurgical Faculty of Maryland, and of the Baltimore Academy of Medicine, etc, etc.

Anæmia in Infancy and Early Childhood. By A. Jacobi, M.D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, New York Reprint from the Archives of Medicine, February, 1881.

Analysis of the Rockbridge Alum Springs, in Virginia, with some account of their History and the properties of the Water, etc., etc.

The Development of the Osseous Callus in Fractures of the Bones of Man and Animals. By Henry O. Marcy, A. M., M. D., Cambridge, Mass., Member of the American Medical Association; Member of Cambridge Medical Improvement Society, etc., etc.

New York Association for Improving the Condition of the Poor. Proceedings of the Board of Managers of the New York Association for Improving the Condition of the Poor.

The Thirty-Seventh Annual Report of the New York Association for Improving the Condition of the Poor for the Year 1880.

Cæsarean Section with Removal of Uterus and Ovaries after the Porro-Müller Method. By Elliott Richardson, M. D., Lecturer on Practical Obstetrics, University of Pennsylvania, etc., etc.

Asphaltum for Pavements and other Purposes. Louisville, Ky.

Catalogue of Field, Garden and Flower Seeds for 1881. Joseph Harris, Rochester, N. Y.

Chronic Bright's Disease in Children Caused by Malaria. By Samuel C. Busey, M. D., District of Columbia. Extracts from the Transactions of the American Medical Association.

Myopia (commonly called Near-Sightedness) in its Various Phases. By Julian C. Chisolm, M. D., Professor of Eye and Ear Diseases in the University of Maryland; Surgeon in Charge of the Presbyterian Eye and Ear Charity Hospital, etc., etc., etc.

Transactions of the Eleventh Annual Session of the Medical Society of Virginia, October 19th, 20th and 21st, 1880.

Meteorological Summary—January.
Station—New Orleans.

Date.	Daily Mean Barometer.	Daily Mean Temp'ture.	Daily Mean Humidity.	Prevailing Direction of Wind.	Daily Rain-fall.
1	30.220	37.7	61.0	North	01
2	30.267	44.2	68.0	N. E.	.....
3	30.133	46.0	90.0	East.	2.82
4	29.908	50.2	88.0	North	83
5	29.865	45.5	82.0	N. W.	16
6	30.051	49.5	67.0	West	.....
7	30.186	47.0	65 0	N. E.	*
8	30 085	52.7	76.0	North	22
9	29.903	50.5	81.0	N. E.	79
10	30.078	41.2	77.0	North	12
11	30.293	42.5	66.0	N. W.	.....
12	30.245	46.5	66.0	S. E.	.....
13	29.937	61.7	77.0	South	.....
14	29.985	52.0	70 0	N. W.	...
15	29.875	56.2	83.0	S. W.	.....
16	29.928	63.7	77.0	South	.....
17	30.116	61.5	92.0	East.	.....
18	30.169	67 2	90.0	East.	1.95
19	29 988	68.0	93.0	East.	2.43
20	29.843	54 0	79.0	West.	1.41
21	30.049	46.5	75.0	N. W.	.....
22	30.252	46.7	60.0	N. W.	. .
23	30.287	39.0	58.0	North	†18
24	30.266	39.7	71.0	North	†23
25	30.401	45.0	59.0	North	.....
26	30.478	44.5	55.0	North	.....
27	30.513	49.2	55.0	North	.....
28	30.527	46.3	51.0	N. E.	.....
29	30.410	50.2	65.0	N. E.	.....
30	30.214	61.5	87.0	S. W.	.....
31	30.089	65 5	88.0	South	.....
Sums	934.561	1561.8	2271.0	.....	.....
Means	30.147	50.4	73.0	North	11.15

General Items.

Highest Barometer, 28th, 30.607.
Lowest Barometer, 15th, 29.871.
Monthly Range of Barometer, 0.756.
Highest Temperature, 75° on 31st.
Lowest Temperature, 31° on 1st.
Greatest Daily Range of Temperature, 24° on 13th.
Least Daily Range of Temperature 5° on 3d and 20th.
Mean of Maximum Temperatures, 56.5°
Mean of Minimum Temp., 43.4°.
Mean Daily Range of Temp., 13.1°.
Prevailing Direction of Wind, North.
Total Movement of Wind, 5,804 miles.
Highest Velocity of Wind and Direction, 34, East, 3d.
Number of Clear Days, 4.
Number of Fair Days, 12.
Number of Cloudy days on which no Rain fell, 5.
Number of Cloudy Days on which Rain fell, 9. Total number of days on which rain fell, 13. [26.
Dates of Frosts, 1, 2, 11, 12, 23, 24, 25,

COMPARATIVE TEMPERATURE.

1871		1876	60°.8
1872		1877	53°.68
1873	49°.5	1878	51°.0
1874	55°.9	1879	53°.1
1875	54°.2	1880	63°.2

COMPARATIVE PRECIPITATION

1871	inches.	1876	4.43 inches
1872	"	1877	5.30 "
1873	5.06 "	1878	5.36 "
1874	1.68 "	1879	2.34 "
1875	8 44 "	1880	1.02 "

*Too small to measure. †Melted snow, heaviest fall since 1852.

L. DUNNE,
Sergeant, Signal Corps, U. S. A.

Mortality in New Orleans from January 15th, 1881, to February19th, 1881, inclusive.

Week Ending.	Yellow Fever.	Malarial Fever.	Consumption.	Small-pox.	Pneumonia.	Total Mortality.
January 22	0	0	17	0	5	98
January 29	0	1	21	0	16	142
February 5	0	1	15	0	11	110
February 12	0	1	21	0	13	118
February 19	0	1	18	0	9	122
Total....	0	4	92	0	54	590

NEW ORLEANS
MEDICAL AND SURGICAL JOURNAL.

APRIL, 1881.

ORIGINAL COMMUNICATIONS.

Pelvic and Vesical Sarcomata in a Young Child.

By THOMAS HEBERT, M. D.

Prof. Bouchut makes the general statement that fibro-plastic formations may occur during foetal life, comprising in this the results of inflammatory actions as well as neoplasms. The lack of statistics to show the relative frequency of new growths in the earlier periods of life, might account for the fact of detailed accounts of such growths, as occurring at different ages, not being encountered in our text-books upon the subject of tumors, authors seeming to content themselves with the remark, that the class which goes by the name entitling this paper are principally met with prior to middle age. I am not prepared to state that the case which is here reported is unique in its rarity, but I have not been able to find, in the medical literature at my command, a description or reference bearing upon a similar case.

During the month of July, 1880, I was called to attend a male child, 17 months old, who had been suffering for a week or more with slight fever, and what had been pronounced an abdominal trouble. At the time of my first visit, an examination revealed the abdomen tumefied in the hypogastric region,

the swelling encroaching, two inches or more above the umbilicus. The swelling was very tense and unyielding, so much so, as to prevent a distinct sense of fluctuation from being felt. The abdomen was exceedingly tender, and the slightest pressure was productive of such great restlessness, that the possibility of making a thorough physical examination was almost precluded. The child had a temperature of 101°, rising a degree or more in the afternoon. At this period he seemed to pass urine freely, although the history of the case previously consisted almost altogether in the fact that, after birth, the child had suffered from dysuria and an attack of retention, and that subsequently, on one or two occasions, more or less removed in point of time, he had again experienced retention. He had been, at each time, relieved by catherization. Judging by what was ascertained from the physician who attended to the child during these attacks, no difficulty had been experienced in the act of passing a No. 3 or 4 flexible catheter. Dullness on percussion was elicited, but not so much as to approach flatness. During the progress of the disease, it varied in degree, according to the amount of intestinal flatus. Rest and sleep were broken and taken at intervals. The child would doze off, to be rudely awakened by the movements of the legs or trunk, or by the floor and cradle being jarred.

The skin and fascia of the abdomen moved freely over the swelling, and at its upper border the tips of the fingers could circumscribe it, the distended intestines being pushed and felt behind. Here it felt hard and tense, the finger not being able easily to make an impression in its walls. No dyschezia existed, but the child had a tendency to constipation, and a laxative was at once administered.

The symptoms and signs gradually increased in prominence, the abdomen gradually swelling, until death brought the poor little sufferer relief. The treatment was mainly palliative, consisting of warm fomentations and anodynes. During the 3rd day, an attack of retention occurred, and was relieved by the warm bath. Afterwards the urine was voided three or four times a day in good quantity, and this fact proved to be misleading in the formation of an opinion of the case. If a catheter

had been introduced (which from the evidence at the autopsy, would have been very difficult), the case would have been much cleared from perplexity, but then a catheter, seemingly, was not needed, as the warm bath sufficed.

Death occurred 20 days after the first day of illness. The privilege of performing an autopsy was granted by the parents, but only partially, as their consent could be gained to examine the abdomen only.

The bladder was greatly distended, and yielded over a pint of clear, almost colorless, urine. The intestines, peritoneum, &c., presented no evidence of disease. The abdominal lymphatic ganglia were apparently normal. In the connective tissue between the rectum and the bladder, just above the prostate gland, and beneath the peritoneum, a tumor as large as a hen's egg, ovoid in shape, was discovered. No capsule was found; the tumor infiltrated to a certain extent the tissue around. It was attached to the wall of the bladder, and the external coat of the rectum, and could not be enucleated, coming away piecemeal. It felt moderately hard and elastic, but was broken easily after the finger had penetrated its substance. The act of penetration was also easily performed. Its consistence was that of hard jelly, its color grayish white, slightly translucent, with a vascular tint in spots. The bladder having been opened, presented no evidence of inflammation, but the mucous membrane was pale from pressure, and the rugæ were somewhat effaced. At the vesical orifice of the urethra, a flattened, button-like, polypoid mass, about half an inch in diameter, was seen projecting into the bladder, and closing it to a great extent, the urine having found its way through the irregular channels left around the periphery of the tumor. Its point of origin was situated about an inch within the urethra, upon the mucous membrane, the pedicle closing almost completely the passage. This formation had the same color, translucence and consistence, as the larger tumor behind the bladder.

Specimens from both were taken, and presented the same characters under the microscope. In what appeared to be a formless hyaline stroma, slightly granular, were seen a vast

amount of large cells, uniform in size, oval or round, and rarely fusiform. They were quite large, as a power of only 100 diameters showed them most distinctly. The nuclei could not be well seen and studied with such a low power. The dimensions of these cells were not ascertained. Only a few fibres were discovered, and most probably formed a part of the cellular tissue in which the larger tumor was imbeded. The structure presented no alveoli, nests, or semblance of such, the cells being disposed equally throughout the stroma. None of these cells corresponded to the description given of leucocytes. The tumors were very juicy, and the juice rich in cells.

The absence of hyperæmia, or other signs of inflammation, is conclusive evidence that these tumors are neoplasms. The characters of the growths make them out as belonging to that malignant class, known as the medullary or soft sarcoma.

The child had seemed to suffer little previous to the time of its last illness; and, excepting the trouble he had experienced on a few occasions in voiding his urine, seems to have been as healthy as his little playmates, and could walk well, and enjoy the various little amusements suited to his age; but on the day when he fell sick, he began by being less disposed than usual to partake in amusement, seemed to have lost his appetite, and was fretful, morose and melancholy in disposition. During dinner, while at table, he began to suffer and cry, was found to have become somewhat feverish, and was put to bed.

This history affords but little ground upon which a notion of the time of origin could be based. He seemed to have been born affected already, to a certain extent, with the trouble, the conclusion that it originated congenitally being drawn principally from the fact of dysuria having existed more or less since birth, at which period and subsequently, retention occurred. But during the greater portion of his short life, he enjoyed comfort and apparent good health, and that apparent freedom from organic disease was only dispelled when the growths, the intra-vesicular one principally, had attained such size as to cause a serious obstruction to function. The difference of size in the tumors and the fact that the smaller one had

only, towards the last, produced any appreciable symptoms, are evidences of its secondary origin; migration, and not infiltration, seeming to have been the manner in which an extension of the disease within the urethra had been instituted. The prostate gland did not present any prominent participation, at least. The size of the bladder in one so young, has sufficient weight in indicating the congenital origin of the trouble, since it was as large, if not larger, than the normal organ of the adult, and must have been subjected to gradual distension and hypertrophy to accommodate itself to the increasing obstruction, and to acquire the force more and more needed to expel the urine.

If then, 17 months, or more, be taken as the time of growth, the size of the neoplasms, at the last, seem to indicate slow progress for the class to which they have been assigned. Beginning possibly, almost at the very inception of life, the larger tumor might have found a starting point in a deviation from normal development in a nest of embryonic cells, which retained their original characters, and assumed an inherent activity of their own, to develop within surrounding organs and construct a tumor, in which the forms of the embryonic type of tissue were perpetuated.

According to authorities, the sarcomata are organic changes of early and middle life, but it must be rare to find them beginning, from all appearances, with life itself. In the development of these tumors, the connective tissue corpuscle and wandering cell, it is said, afford the elements upon which the structure and character of the tumor depend. The embryonic cell, which fails to enter into the process of differentiation of tissues and organs, must, if it does not disappear, develop a new form of tissue, in which all the essentials of its primitive type may be preserved. Such a tissue would be abnormal, and a rapidity of growth would be a characteristic, since the process of nature would be little expended in higher development, but rather in deriving cell from cell, and thus, augmenting their number without change. The existence of that impetus, possessed by the growth of the body during the early periods of life, should have a tendency to preserve a vigorous charac-

ter in the tumor; a necrotic process of disintegration might not make its appearance until a longer time had elapsed, than in the history of a similar tumor, occurring in a person of full growth, subjected to more depressing influences. The case under consideration presented not the slightest evidence of the tumor's breaking down, even after the lapse of time which is given as composing the limits of their existence.

To discuss the origin of a disease, where so much doubt exists, as in this case, may be of little profit. It might be thought that its origin was such as is here conjectured, that an abnormal deviation from normal process, occurring at a very early time, created a lesion of malignant disposition, possessing all the characters of a sarcomatous tumor; but it might be correct to attribute the first manifestations of disease, dysuria and retention, to other causes than those assigned, to an impressible nervous system, or to disorders of childhood, which might have existed; although the association of such symptoms with the existence of a new growth, evinces more than the probability of their dependence thereon.

The rectum and bladder, in the second month of embryonic development, are not separated from each other, but are temporarily represented by the cloaca of Woolfian bodies. Then in the development of the foetus, a process of atrophy, in certain parts, and of formation and growth in others, must take place, in which structures that are no longer needed are replaced by higher ones, and shrivel away to become useless masses of tissue for a time. The Woolfian convoluted tubes are replaced by the kidneys, and the common receptacle, by the rectum and bladder. In adult life, remains of the Woolfian bodies are found in the parovarium, and similarly, remains of the cloaca, after its division into higher structures, might exist. Out of such a mass of useless tissue, from some anomaly and perpetuation of circulation, some arrest of atrophy, is it improbable that a new growth may originate? Such an occurrence might supervene; such a body, not disappearing altogether and continuing to be fed, would take on a new growth, which is not called for by the natural processes of differentiation and development. This ultra-normal process

being *abnormal*, it is reasonable to infer that, from causes existing to preserve a definite character in the growth, and the absence of influences which, in a normal development, brings a tissue out of a low state into a higher, these perpetuated remains of embryonic bodies, stamped with a primitive type, would continue with unchanging characters, and form a tumor of the sarcomatous class. Hence the early beginning of the growth, possibly in the first months of intra-uterine life; the character of the growth, its resemblance to, if not identity with, primitive embryonal tissue; the occurrence of unknown disturbances, which might prevent the disappearance of parts which normally should disappear, and cause them to continue growing; and last, though not least, in suggestive force, in this chain of considerations, the situation of the tumor, go far in supporting the hypothesis, that the origin here put forth is not improbable, that the tumor may have sprung from remains of the common appendage, spurred on by processes and changes occurring deep down in the first physiological events of foetal life, of which we can know but little.

Sarcomata, according to authorities, are to be met with principally in the more superficial structures of the body, the connective tissue beneath the skin or forming part of superficial organs; the *alveolar*, and especially the *myeloid*, variety in the bones—the heads of the long bones being more especially prone to contract the latter variety of the disease. When found, therefore, existing in internal organs, or their neighborhood, they are apt to be secondary to similar growths elsewhere, the result of an acquired diathesis, a migration or transplantation of cells. This character of malignancy may have been wanting in the case under consideration. Other regions of the body than the pelvis and abdomen were not examined, and it cannot be said that the disease existed elsewhere. So far as the surface of the body was concerned, it presented no evidence of disease. Unless a thorough and complete search, in every organ and part of the body, had been instituted, a statement as to the primary character of the larger growth cannot be absolutely maintained. But, for all intents and purposes, it may be considered primary, since the

non-existence of a tumor, so superficially situated as to arrest the attention of the physician or the attendants, and the absence of any symptoms or signs pointing to disease in any other region of the body than the pelvis, would, at least, render improbable the existence of a growth of similar character in other parts.

An interesting point in the study of the case, might be the differences which would exist between this kind of new formation and carcinoma in the same situation. The tendency to peripheral growth by infiltrating surrounding structures was not as well marked as it most probably would have been in cancer. The mass of the tumor was homogeneous enough to denote that this process was not the only manner of growth. Although its boundaries were not clearly defined, and it presented an appreciable degree of spreading into the surrounding cellular tissue, the softness and uniform arrangement of structure interiorly, denoted that this peripheral increase was supplemented by that central proliferation which is common to neoplasms. In the softest variety of carcinoma, the fibrous stroma plays a very conspicuous part, though not the most important. It is composed partly of new tissue and partly of the tissue in which the tumor finds its origin. The surrounding structures are involved in the growth, and not displaced, as in less malignant formations. In the case under consideration there was more displacement from central proliferation, and less infiltration from peripheral growth, as denoted by the absence of the alveolar structure, and the uniformity of the matrix and arrangement of the cells. Therefore, the danger to life, in this case at least, consisted in no special degree of malignancy, but, as could well occur in the history of more benign tumors, from their situation and mechanical interference with an important function in the economy of life.

The displacement of the rectum towards the left side of the pelvis comes in point, and will account for the fact of fœcal retention not having occurred, at the same time that the change of position and partial encroachment upon its lumen explain the tendency to constipation which existed. In the history of cancer, the rectum would have played a more important part,

Its closer proximity to the growth would, most probably, have been cause for its involvement therein, and more pronounced, or less ambiguous symptoms, referable to that organ, would have appeared.

The absence of special indications of cachexia was also an important feature in the case. At the end of 17 months a cancerous growth would, most probably, have manifested its general effects upon the system at large, by the occurrence of the blood changes which constitute such a bone of contention in the discussion of the constitutional nature of carcinomata. And the absence of a cachexia explains the preservation of health and tone, until the mechanical effects of the growths brought about an indirect disturbance. At the last, it is true, pallor was exhibited, and a degree of emaciation, but manifestations of a profound alteration in the processes of life were unaccompanied by that more particular evidence of dyscrasia, discoloration of the skin.

The pelvic and abdominal lymphatic ganglia would have shown, at least, a degree of participation in carcinoma. But in this case no such manifestation of a manner of distribution, almost peculiar to cancer, occurred; rather, that migration through the medium of the blood circulation, or through connective tissue spaces or channels, which happens later in cancer, and sooner and more frequently in the medullary sarcoma. It may not be necessary for a proof of this office on the part of the blood, that a secondary growth should fix upon a very remote locality. It might as well display itself in some part of the same region; and the vesicular polypoid growth, in the case of this child, originated upon the mucous membrane of the urethra. A lapse of apparently healthy tissue, within and without the bladder, intervened between it and the larger tumor behind and above.

This case illustrates the perplexity that sometimes may trouble or baffle the surgeon, especially the newly fledged one. Apart from the point of chief interest, the fact that the tumor, from all appearances, originated at an unusually early age, the case presents but little for practical consideration. The mea-

greness of the antecedent history, the lack of competency on the part of the child to express its sufferings, past and present, threw a cloud of obscurity upon much matter which, if known and duly appreciated, would be of value and interest.

Surgery is almost without power to relieve such a case. Civiale once succeeded in producing the avullsion of a similar polypoid growth in the adult urethra, by means of the lithotrite, but in a child, 17 months of age, apart from the difficulty of diagnosis, such a procedure could hardly be called into service.

Proceedings of the Orleans Parish Medical Society.

REGULAR MEETING.

NEW ORLEANS, February 28, 1881.

A quorum being present the Society was called to order by the President, Dr. Herrick.

After the transaction of various matters of business of the Society, Dr. Bickham read his paper on Constipation.

CONSTIPATION.

A few crude Notes hurriedly presented to the Orleans Parish Medical Society.

There is no more frequent source of bodily discomfort than this, and it may produce; or increase the tendency to disease. The principal causes are neglect of timely attendance upon the calls of nature; want of exercise; excess of mental strain; and all the causes of dyspepsia, of which it is an almost constant part. Organic obstructions, of course, may also give rise to it, as, stricture, cancer of the bowels, tumors obliterating the caliber by pressure, an enlarged and retroverted uterus, pregnancy, etc.

Sea sickness is a marked cause of constipation because of want of exercise; also, for want of retention and digestion of food, which are necessary to give tone and create peristaltic action.

Another important factor probably in these cases is the regurgitation of the bile through the stomach by the act of vomiting. On the other hand excessive exercise may produce

constipation by promoting assimilation and absorption of the contents of the alimentary canal to a greater extent than usual; and in this way sea voyages in the absence of nausea, are promotive of constipation by more rapid absorption and assimilation. In a strictly pathological sense, it may depend upon muscular torpor of the intestinal canal, or defective glandular secretion, or both. It is essentially a functional disorder, and incidental to various affections. Its seat is mainly in the large intestine, due to conformation of this part, and its function. The anatomical arrangement of this portion of the bowel shows it to be intended to serve as a temporary reservoir or depot for fecal matter, thus providing against too frequent acts of defecation. The contents of the alimentary canal are propelled more slowly along the large than the small bowel, *first*, because the circumference of the former is larger in proportion to its muscular power; *second*, in the ascending colon the contents are propelled for a considerable space in opposition to gravitation, and, also for a smaller space, at the sigmoid flexure; and *third*, the liquid portion of the contents is absorbed in their passage through the small bowel! Experience proves that one good evacuation daily is the rule in health, but there are exceptions. In determining the presence of this affliction in any given case, the habit of the individual must be taken into account.

Constipation gives rise to various local morbid effects, as a feeling of pressure in the perineum, a sense of abdominal distention, flatulency, diarrhœa, mechanical dysentery, colicky pains, hemorrhoids, pain in the head, dullness of mind, flushing of face, palpitation, and general malaise and indigestion; and if the act of defecation requires violent straining efforts, these sometimes occasion hemorrhage into the brain, and hernial protrusions. Such may be the impaction and distention of the large bowel, as to produce permanent impairment of its muscular power, and thus fasten for all time this affliction upon the person.

The physician is not consulted for occasional constipation. It is only when the habit is chronic or confirmed that he is consulted, after the chief mischief is done. Now, in order to comprehend the pathological character of the affection in such

cases, and its true cause, certain points pertaining to the function of defecation in health are to be observed. It has been ascertained that the rectum, particularly, in its normal State, and, for the most part, the entire bowel below the sigmoid flexure, is empty, or nearly so, and endowed with animal sensibility, which in health gives notice of the presence of feces, and occasions the desire to defecate. If this desire is heeded and the bowel evacuated all is well, but if not, impaction, torpor, and constipation ensue. The ability to perform the act of defecation involves a certain power in the large bowel, abdominal, and other muscles which co-operate in the act, and if any of these are at fault the act is poorly accomplished. The abdominal muscles play an important part and if these are weakened by obesity, by distention in pregnancy, by anæmia and other enfeebling conditions, the bowel hesitatingly performs its function of defecation and the habit of constipation is soon acquired. But, worse still are the torpor and partial paralysis of the muscular tunics of the bowel, which rapidly ensue, if the disease, produced by the presence of fecal matter in the lower bowel, is not regularly heeded. Preoccupation of the mind, imperative business, want of a suitable opportunity, or place for the purpose, and many other excuses, cause the human family to postpone this important duty, and the result is that the ordinary animal sensibility of the rectum is measurably lost. Finally, the lower bowel becomes so accustomed to this state of impaction and distention as to give scarcely any sensation at all, and one may go a week or even a month without evacuating the bowel. The consequences of this state of things are not only great discomfort and diseased bowel, offensive perspiration and exhalations from the body, but re-sorption of the contents of the bowels and contamination of the blood. The great mass of the human family seem to view this important function of the bowel as a very *non-important* and offensive one, and attend to it as seldom and quickly as possible to get rid of it. The act hurriedly or half done is little better than not done at all; for, this forced, hasty, and partial evacuation irritates, invites disease, and does not relieve the desire. In the ordinary animal creation this desire created by the presence

of fecal matter in the rectum, is heeded at once, regardless of place or opportunity; hence with them there is no impaction or partial paralysis of the bowel, hemorrhoids, and various other affections.

Volition, systematic training of the bowel, which would be all sufficient with the human family to maintain regularity, is the chief means in reality of fixing the habit of constipation by deferring duty in the matter. The cause of constipation ascertained in any given case, the remedy readily suggests itself, The use of volition at the same hour every day is worth more than all the drugs. In this way a child three or six months old may be trained to perfect regularity, and the proper way to obviate constipation is to tell the mother the importance of this. Bad and inefficient food and poor digestion are often the cause of it, and by regulating these and insuring the digestion of good nutritious food, tone is given, and peristaltic action follows. If torpor exists pepsin and nux vomica are the best remedies. Constipation is best relieved by appropriate food and management, and not by purgatives.

In the discussion which followed, Dr. Chaille said Dr. Bickham had omitted mention of one very important remedial agent, exercise. In his own experience, he had found occasional constipation, to which he was subject, invariably relieved by a long walk. Sometimes he had derived very great benefit from a walk to the lake and back. He, therefore, thought the importance of exercise could not be overestimated. Dr. Bickham had also not referred to the use of alcohol in causing constipation He had observed that if he exceeded in drinking alcoholics more than a certain amount daily, he was sure to be constipated. Thus, two cocktails in one day generally bound up his bowels. He did not know how the effect was produced, but thought one element in its causation was the diminished quantity of bile poured into the bowel, the results of hepatic derangement by the alcohol. We all recognize the cirrhotic liver as the results in many or most instances of the long continued drinking of alcoholics; did not occasional drinking temporaily interfere with the bile—secreting function of the liver ?

Dr. John B. Elliott did not agree with the preceding speaker. He laid more stress on individual peculiarities regarding alcohol. Some habitually used to drinking whisky, never suffered from constipation. It was true that alcohol produced a temporary congestion of the liver. He had personal experience of this. Once he was afflicted with internal hæmorrhoids. A drink of whisky increased the distention and pain, evidently by congesting the liver and damming back the blood in the portal circulation. But he did not think this congestion so apt to cause constipation as diarrhœa. It was a fact that old topers were frequently attacked with diarrhœa. Exercise, which he considered an excellent adjuvant to other remedial measures, he did not think was *essential* in all cases to the regulation of the bowels. In certain instances, indeed, violent exercise, by carrying off large quantities of water through the skin, occasioned constipation. He attached much more importance to the influence of correct habits, including the exercise of the will at a regular time every day to accomplish a movement of the bowels.

Dr. T. G. Richardson considered the influence of will a purely artificial stimulus. We should look back of will-power. Carnivorous animals got along very well with one evacuation of bowels in a comparatively long period. Herbivorous animals, on the contrary, accomplished an easy movement of the bowels at least once a day. Animals have no will. Some explanation must be given for this difference between these classes of animals. Distention of the bowels he regarded the natural stimulus to peristalsis. For this reason a certain amount of "long food" was needed and therefore craved by herbivorous animals. Man, especially when considered as of the Darwinian Descent, must have originally been and was now essentially an herbivorous animal. [Dr. Chaillé here suggested *omnivorous*, but Dr. R. contended that carnivorous habits had been acquired simply]. Vegetables were undoubtedly intended for his food. The use of meats was artificial, acquired. Farinaceous foods did not promote regularity of action of bowels—long vegetables and green were needed. A horse fed on corn only would become constipated.

Dr. Elliott again contended that habit was essential. He had seen babies trained in this way, or rather their bladders and bowels taught to act with regularity. Animals could likewise be instructed.

Dr. Chaillé thought that children thus trained would pass more fæces in a given time, since the articles of food would remain a shorter time in the canal to undergo absorption. Dr. Elliott agreed that more might be passed at each time but the aggregate would be the same. The longer fæces were retained the more solid they became from absorption of fluid contents. Any deleterious matters, therefore, taken into the system would throw the work of elimination on some other organ and thus sometimes injure health.

Dr. Bickham contended that will was the very thing that produced the constipation. He was of opinion that no influence of will was required to maintain regularity of action of the bowels. Simply letting the bowel act when ready, as indicated by the sensation of distention, was all that was needed. Of coures, habits could so arrange that this stimulus would be present at a regular time every day.

Replying to a question, Dr. Bickham said he thought the stricture in the case related by him in the paper was not the cause of the constipation but the effect of inflammation, causing adhesions, the inflammation being the consequence of the constipation.

Here the discussion ended.

F. W. PARHAM, M. D.,

Recording Secretary.

Improved Treatment of Newly-born Infants.

By O. P. LANGWORTHY, M. D., of Clinton, La.

The doing away with many annoyances, such as barbarous applications to and manipulations of the innocent infant, as soon as ushered into the world, has a negativeness about it that cannot, I think, be strictly entitled "Improved Treatment." It is not treatment: it is simply consulting the com-

fort and physical welfare of the child, by abstaining from annoying the helpless creature unnecessarily, and in many cases injuriously. Some may think this a very trivial, unimportant matter; nevertheless it seems to have simultaneously awakened interest in the minds of medical men in different sections of our country, which, I think, we can say without boasting, is fast taking the front rank in the science of medicine in all its branches, gradually bidding defiance to disease and accident.

One good doctor in Illinois, J. Y. Stokes, M.D.; another in Maryland, W. V. Craigen, M. D., in Louisiana, in the March, 1880, number of your journal, E. E. P.; and, fourthly, the chairman of the gynæcological section in the Texas State Medical Association, L. J. Russel, M. D., have all, according to my interpretation of their views, come out plainly denouncing the bandaging of newly-born babes. The essay of Dr. Russel is spoken of, in a communication to the *Medical and Surgical Reporter* of Philadelphia, as *novel* and original. It certainly is not to Drs. Stokes and Craigen or myself, as far as my experience is considered; and years ago Prof. Hawthorn, of the University of Louisiana, at the time of his death, taught the uselessness of the bandage, and also Prof. Brickell.

I, for one, am right glad to see this expression of condemnation of what Dr. Brinton, of Philadelphia, in one number of his *Reporter*, called an "old ceremony." I say, when "babe" comes into the world, treat it gently, until it becomes acclimated. I do not think the pages of your journal could be more beneficially filled, as far as they will go, than by republishing from the *Medical Herald* of Louisville, Ky., August, 1879, the following eleven good reasons which Dr. Stokes, of Graysville, Illinois, gives for dispensing with the swathing band for infants:

"First—Bandaging new born infants is notoriously contrary to nature.

"Second—All will readily admit that a bandage is troublesome, inconvenient, offensive and filthy—if not unnecessary.

"Third—The putrefying cord, 'bundled' up in the old style, oftentimes poisons the child, and leaves an open sore for days,

weeks, and sometimes months, before all the applications of '*soot*, burnt alum, scraped horn, burnt leather,' as well as all the ointments, or anything else, will heal it up.

"Fourth—The bandage, as generally applied by the nurse, must, and does to some extent, at least, interfere with abdominal respiration, or the free and full expansion of the base of the lungs

"Fifth—The bandage, where firmly applied, interferes with the circulation of the lower half of the child.

"Sixth—Should the bandage 'slip' down before the cord is detached from the child, it is then pulling against the *tender* parietes of the abdomen.

"Seventh—Should it 'slip' up, the same trouble is produced.

"Eighth—Should it move to the right, we have the same condition.

"Ninth—Should it move to the left, it produces the same trouble.

"Tenth—If by any means the front part of the bandage be lifted from the child, we have the same state of affairs.

"Eleventh—The trouble of calling in some expert old lady to see about the bandage."

Dr. Craigen, of Cumberland, Md., in a communication well worth reading, published in the *Medical & Surgical Reporter* of Philadelphia, January 3d, 1880, says: "In my treatment of the newly-born infant, it is not washed. It is not dressed. It is not fed. It is not bandaged. Its umbilical cord is not compressed." This, as we might say, negative treatment is kept up for twenty-four or thirty-six hours, and the infant handled as little as possible until the cord drops off.

In the March, 1880, number of your journal, E. E. P. says, that in two cases recently, he has adopted what he calls Stokes' method with satisfactory results.

I am not desirous of notoriety, but I now do what I have proposed for some time to do, but neglected for various reasons—give you my experience in what I term, for want of a better expression, the do-nothing treatment for the first three or

four days of their lives of the little new comers. As *all* students, until within the last few years, and probably as students in many medical schools are still taught, I commenced practice with it thoroughly impressed on my mind that the child must be nicely washed, not leaving a speck of foreign matter on it; that all the items of a bandage must be attended to; and then it must be annoyed with sundry shirts, long petticoats with much waist, and this process occupying from one-half to one hour, no matter what the surroundings as to temperature of room, or power of resisting the various kinds and characters of its new abode, or how much opposition the poor creatures made with its lungs. Then, whenever it cried, it must be nursed; if that did not pacify, undress and hunt a stray pin; if that did not yet quiet, then paregoric or Mrs. Winslow's Soothing Syrup. Of course, at first I thought it all right and necessary, but many years ago began to question the virtue of it; and now I look back with regret to the time, near twenty-eight years ago, when a daughter was born in my family, and died when only four days old of trismus nascentium, in my opinion caused from bandaging, done in good faith, by a kind old lady who "knew just how to dress a baby exactly right."

The first orthodox disapproval of the odious and cruel treatment I hailed with joy, and feel that I ought long ago to have published my opinion, not for its great influence, but, as every little helps, it would, that much sooner, have been universally condemned. Many years ago I began in a modest way to let my patrons know my views, by talking of the matter to the wise old ladies, managing to have the bandage put on loose, then getting some mothers to dispense with the bandage, on condition that I would watch and drop in often and see to the welfare of the "dear little creature," etc., etc. Since the war my obstetrical practice has been quite large, and now for many years I have laid aside the bandage altogether. Mothers, old and young, who see the good result, have become really enthusiastic in their praise of my course. Some of my most bitter opposers at first, are now my warmest advocates.

Like Dr. Craigen's, my treatment is a great deal of the "*do not*," for the first few days, until the cord drops off. I believe

this course lays a better foundation for the future of the child. It seldom takes cold, I hear less of colic, as there is no unnecessary exposure, or giving of pain or keeping awake, or in any may interfering with nature's laws, which if let alone, are perfect. I am well aware that few are courageous enough to fight public opinion, or run any risk. They think now if anything should go wrong, it would be certain to be laid to the want of a bandage; and when it happened to be in a section of country where the physicians had never favored it, that would be the case: but there need be no bad result. In my practice I have not had a single case that turned out badly; but I have been called out of the line of my practice to cases of convulsions, that I relieved by unfastening the bandage and also to cure up very sore navels when, so far as the old treatment was concerned, the way it was carried out was unobjectionable, for it was well done. In sending this communication, I rejoice in putting my name on record versus bandaging and too soon full dressing, for newly-born infants.

Report upon Experiments—Subcutaneously—with Pilocarpin.

On Robert Conners, laborer, age 27, bed 387, W. 25, C. H.—17 injections were given, 11 of which are now reported.

1st—December 14th, 1880—Before injection—Pulse 84 and scarcely perceptible; respiration 22; measures around abdomen above iliac crest, 35 inches; temperature (in mouth) 100.

After injection of gr. $\frac{1}{3}$, perspiration began in 2 minutes, first observed on forehead and rapidly spreading over whole body from vertex to his toes. Salivation began in $2\frac{1}{2}$ minutes. Both perspiration and salivation, were profuse, the former lasted for $2\frac{1}{2}$ hours, the latter 2 hours.

Respiration unaltered—Temperature after 1 hour $98\frac{2}{5}$; pulse after 5 minutes, 89, strong and full; pulse, after 3 hours, 84 and feeble.

2nd—December, 15th—Before injection; pulse 93 and very feeble; respiration 23; temperature (per orem) $99\frac{3}{5}$.

After injection of gr. ⅓—Perspiration began and continued as on previous day; salivation the same; pulse, in 4 minutes, 88, strong and full; pulse, in 90 minutes, 82 and feebler, yet stronger than before injection; respiration unaltered; temperature, in 6 minutes, 99; temperature in 90 minutes, 98; measures around abdomen 34¼ inch.

3rd—December 16th—Before injection; Measures 34; pulse 78 and very feeble; respiration 24; temperature (per rectum) 100.

N. B.—Patient who could not leave his bed before, was found taking a walk in the yard, looking cheerful; anasarca greatly reduced, but strikingly is this noticeable on his eye-lids, which the day before were so much puffed, that patient's eyes could hardly be seen, appeared now almost normal. Patient asserts to feel greatly improved.

After injection of gr. 1-6—perspiration in 5 m.; salivation in 5½ m., and former continued for 1½, the latter for 1 hour and 10 m. Pulse in 10 m. 90, strong; pulse in 40 m. 84, strong; respiration 22; temperature (in rect.) in 17 m., 100°; temperature (in rect.) in 50 m., 99½°. At the same time temperature in mouth, 98°.

4th—December, 17.—Before injection—measures 34 inches; pulse, 82, feeble; respiration, 22; Temperature (in rect.), 99½°.

After injection of gr. ⅓—perspiration in 4 m.; salivation in 5 m. Both as profuse as on previous days. Pulse in 7 m., 88, full, and strong; in 20 m., 90, strong. Pulse in 70 m. 84, and feeble; temperature in 15 m., 99½°, in one hour 99°. Salivation lasted only one hour.

5th—December 18th, Saturday.—Patient was found greatly improved. Oedema, especially that of the face, very much reduced. He enjoyed walking in the yard, his appetite improved, his expression is cheerful. Measures 32½. The injection was suspended until Monday (for 3 days), at patient's own request who complained of feeling weak and nervous in consequence of his perspiring so much.

6th—Monday, December 20.—Before injection—the former state of oedema found to have returned, He again measured

around abdomen 35 inches; pulse 86 and feeble; respiration 22; temperature (in rect.), 99½.

After injection of gr. ½—respiration in 2½ m.; salivation in 3 m.; perspiration continued for 3 hours and very profuse; salivation for 2 hours and reached nearly 5 pints.

Pulse in 6 m. 98 full and strong; pulse in 1 hour 90 and not as strong; temperature (in rect.), in 1 hour 98⅗.

N. B.—My attention having been frequently attracted to the fact that shortly after perspiration and salivation are well established, patient evinces a very strong desire to micturate, so that twice before he seized the pan which was placed at his side to receive his saliva, with a nervous haste and emptied his urine in the same, while thermometer in his mouth or in his rectum. The same occurred to-day. He also assured me that he passes a far greater quantity of urine during the 24 hours since he was put under the use of Pilocarpin than before. But being deprived of all means necessary for the acurate observation of the quality and quantity of food and drink he is given, and of collecting his urine, I can only give the patient's assurance for what it is worth. Dr. Matas had also once called my attention to a kind of hectic flush that makes its appearance on patient's cheek, immediately after the subcutaneous injection, and which subsequent observations confirmed. Patient also pretended to experience a sense of heat at the same time.

7th—December, 21.—Before injection—measures 35 inches; pulse, 84, and only counted after several attempts. Tempera ture (in rect.), 99½°.

After injection of gr. ½—Perspiration in 2 m.; salivation in 2½ m.; pulse in 4 m., 92, full and strong; pulse in 30 m., 94, full and strong; pulse in 60 m., 90 and feebler; temperature in 1 hour, 98½°.

8th—December, 22.—Before injection—measures 35 inches; pulse, 79 and feeble; temperature (in rect.), 100°.

After injection of gr. ½—Perspiration in 2 m.; salivation in 2½ m.; pulse in 6 m., 98, strong and full, yet not as well marked as on previous occasions. Pulse in 30 m. 94, and strong; pulse in 60 m. 90, and feebler; temperature in 80 m. 99½°.

9th—December, 23.—Before injection—Measures 35 inches; pulse 84, and feeble; temperature (in Rect.), 101°.

After injection of gr. ½—Perspiration and saliva as on previous occasions. Pulse in 5 m. 102, full and strong; pulse in 45 m. 90, and feebler; temperature in 45 m. 100 2-5°.

10th—December, 24.—Before injection—Measures 34: pulse 94, and feeble; temperature (in rect.), 101.

After injection of gr. ½—Pulse in 5 m. 98, and very strong, patient micturated in 8 m. after injection; temperature (in rect.) 15 m., 100 3-5°. Perspiration and salivation as on former occasions.

11th—December, 29.—Before injection—Measures 35; pulse 80; temperature (in mouth), 98 4-5°, (in Rect.) 99 3-5°.

After injection of gr. ½—Perspiration and salivation as before. Pulse in 15 m. 90, and strong; temperature in mouth 98 2-5°, in rectum, 99 2-5°. Patient micturated in 15 m. after injection.

RESUMÉ.

The facts observed and the results obtained by the foregoing experiments are so positive and striking that little comment, it seems, is necessary and still less excuse for making the following deductions.

1. Temperature.

Pilocarpin has *no influence on temperature*. Though it is true that a slight hectic flush, accompanied by a sensation of heat, is produced co-instantaneously with the injection, yet this is of such transient nature that it scarcely deserves recognition. From the first two experiments it will be noticed that a very marked reduction of temperature was observed. But suspecting that the large quantity of saliva which accumulated in patient's mouth while containing the thermometer was the cause of that reduction, I soon substituted the rectum for the observation of temperature. And there it was observed that only after the lapse of at least one hour was a slight lowering of temperature found. But even this slight difference must be attributed to the perspiration coming in contact with the thermometer in the rectum, since I have invariably found profuse perspi-

ratio there. And for evidence of the correctness of this supposition I would refer to experiments 3 and 11, showing the influence of the presence of the excreta on the thermometer.

2. RESPIRATION.

No influence on respiration can be attributed to the drug, since not only was there no alteration in the frequency of respiration noticed, but even the quality remained unchanged.

3. DIGESTION AND DIGESTIVE EXCRETA.

Unlike Jaborandi it has *no influence whatsoever on digestion.* Although patient's appetite was increased, but that was unmistakably due to the general improvement of patient's health. Patient was also constantly constipated, which constipation, however, dated prior to the inauguration of the experiments, and was at different times relieved by different hydrogogues.

4. CIRCULATION.

Unmistakable is its action here. Immediately after injection the heart's action is not only accelerated, but positively stimulated and blood pressure greatly increased, both manifestations however, gradually diminished in intensity after one hour's time and finally entirely disappearing with the cessation of perspiration and salivation. That blood pressure is increased could be demonstrated beyond a shadow of a doubt. For while patient's pulse could hardly be felt before injection, owing to its feebleness, and especially the œdematous condition of the wrist, it became strong and full immediately after injection, as was noticed also by each and every one who have taken interest in the experiments, for example, Drs. Matas and Barrow and many students.

5. SECRETION.

With a power almost magical, vehement and relentless, prompt and never failing, it waves the perspiration from beneath the skin, and streams the saliva from the salivary glands. The larger the dose the more promptly is its telling effect. Gr. $\frac{1}{3}$ requires 4 to 5 minutes to produce profuse perspiration, while only two minutes were sufficient for the same activity after gr. $\frac{1}{2}$.

Prof. Suschtchinski, as quoted by Dr. Farquharson, asserts that larger doses than gr. ½ produce violent purging. This I had no occasion to test. But his assertion that it diminishes temperature from 1½ hour to 4 hours after injection, I must contradict, since I am satisfied that it does not lower temperature at any time.

With regard to its influence on the *quantity of urine*, I am inclined to believe that *it increases it considerably*, although no positive assertion can be made. Drs. Tyson and Bruen, as quoted by the above mentioned author, have determined that the amount of urine and urea are both increased during the 24 hours following its administration.

Mr. J. N. Langley (cited in op. ibid.) observed that larger doses than gr. ½ produces no salivation at all. Atropia counteracts the effects of pilocarpin.

The effects of the drug on our patient were remarkable for their beneficial results, as well as for the promptness in producing these results. One injection sufficed to decrease the general oedema considerably, but especially that of face, and 4 injections reduced the circumference of abdomen 2½ inches. More uniform was this diminution of oedema around the leg and thigh, which I failed to record in my notes on the experiments.

That patient lost in weight can only be surmised, since no scales could be procured in the Hospital for that purpose. I also regret my inability to test the urine for urea. But whosoever saw the patient previous to the beginning of the experiments, with all the symptoms of threatening uremic convulsions, could doubt the presence of large quantities of urea in the saliva, taking in consideration that all those threatening symptoms disappeared, while nothing else but pilocarpin was administered.

No further injections have been administered to patient since December 29th, and practically none seems to be needed now. His general health is wonderfully improved and the poor helpless creature, into every nerve of whom his frightful disease seemed to ring in silent thunder voice the cold and cruel warnings of death, who, bathed in pain and despair, lay chained to

his bed, motionless, with a countenance ghastly pale, listless, indifferent and apathetic, now enjoys air and sun-shine, and the sympathetic interest his mind shows for the cravings of his stomach is only too often manifest. His general health is greatly improved, his appetite is good, his oedema considerably reduced—and all this, I believe, justly to be able to ascribe to the use of pilocarpin, and to pilocarpin alone.

At the conclusion, I beg leave to lend expression to my profound conviction that the day is not far when pilocarpin will be used with great benefit, not only in dropsy, but in all forms of pyaemia, and in all fevers threatening with uremic poison, as yellow fever, etc.

To Prof. Dr. J. B. Elliot, whose great mind and noble heart, in teaching with conviction and advising with kindness, have endeared him to me, this is submitted in gratitude and profound respect by

MAX. URWITZ, M. D.,
An alumnus of the Med. Dep. Univ. of La., 1881.

February 1st, 1881.

Current Medical Litterature.

INCRUSTATIONS OF CADAVERA IN ARTIFICIAL STONES.—NEW METHOD OF INHUMING THE DEAD, ACCORDING TO THE PRECEPTS OF HYGIENE.

From the Cronica Med. Quirurgica Havana.

(Translated by Dr. Rodolfo Matas, New Orleans.)

* * * * * * * *

A new method of inhumation has lately been recommended by engineer Crulz. It is a procedure, by which the bodies of the dead are incrusted in an artificial stone, which is perfectly impermeasble to gases, and which, consequently, will not permit the escape of the slightest mephitic emanations.

Before proceeding to the operation in question, the cadavera are submitted to the following treatment: The body is placed in a bath composed of equal parts of lime and clay, dissolved in a sufficient quantity of water. Upon the removal of the body, which is found to be covered with a thick layer of the

above-named substance, it is covered with another layer of natural cement, destined to absorb the excess of water, after which the cadaver is submerged in a bath of pitch and covered, finally, with a layer of lime; the contact, only, between the lime and the calcareous cement being sufficient to solidify the pitch rapidly, a thick coating being formed in this manner, which posseses the same properties as the pitch of Judea, a substance to which the Egyptian mummies owe their peculiar indestructibility.

As can be readily understood, a subject so prepared can exhale no marked odor; the different layers of lime, clay and pitch forming around it a kind of solid wrapping, which is opposed, effectually, to the disengagement of gases. A cadaver, after being treated in this manner, is deposited in the interior of a mould, which is filled with the following mixture, that very soon solidifies and is transformed into stone:

Cement	5 parts.
Sand	3 "
Ashes	2 "
Water	q. s.

The stones which are obtained by this process acquire a remarkable solidity. Obituary inscriptions can be engraved upon them; they can be placed in mausolea, or can serve for the construction of sepulchral monuments of various forms.

Following a different course of thought, Dr. Panizza, of Padua, says Dr. Vaissen, has just published a pamphlet entitled "Investigations upon a new method of inhumation of the dead, according to the rules of hygiene." The special object of this system is to promote the complete decomposition of the dead body, in the shortest period possible, and the destruction by fire of the miasmata resulting from putrefaction. To obtain this double result, the author proposes the construction of special cemeteries, in which long corridors should exist, designed to contain niches for the dead. The sarcophagi, destined to contain the bodies, lightly lined with porous fabrics, should be provided with openings to permit the free circulation of air around the cadaver, the subject being placed upon a layer of animal charcoal and sand, and finally covered with another layer of the same mixture.

Dr. Panizza explains that all the niches should be provided with openings to permit the access of air, the niches being at the same time in free communication with each other by a system of tubes, designed for purposes of ventilation, all of which (tubes) would terminate in a central chamber, provided with a chimney at least 10 meters high. Within this chamber a brazier would be placed, to burn all the hydrocarbonaceous products of putrefaction brought there through the tubes. With the view of obviating the expense that might be occasioned by the permanent use of a lighted brazier, the pipes might

be provided with valves that could be opened at pleasure; after rainy periods, for instance, or whenever the fire would be lighted in the brazier.

From what has just been stated, it will be readily understood, as Dr Vaissen says, from whom we have taken our data, that the apparatus which has been described by Dr. Panizza would be, in final analysis, nothing more than a form of thermic ventilator. The advantages that would result from the adoption of the system that has just been described would be:

1st. Lessened liability of interring living people, because of the perforated coffins employed.

2d. Destruction of the gases and organic principles so frequently deleterious and always repugnant and inconvenient, which are evolved by the bodies of the dead.

3d. Diminution in the area of burial grounds.

4th. Fitness of any soil for burial purposes, excepting marshy localities.

5th. Innoxiousness of a cemetery so constructed, even when situated in the midst of populated districts, or near streams of potable water.

6th. The indefinite period of time that a cemetery might remain in use when so situated.

RIDDELL'S BINOCULAR MICROSCOPES: AN HISTORICAL NOTICE.

By SURGEON J. J. WOODWARD, Bt.-Lieut. Colonel, U. S. Army

In April, 1879, a large binocular microscope, made a quarter of a century before by the Grunow Brothers, of New Haven, Connecticut, for Dr. J. L. Riddell, then Professor of Chemistry in the University of Louisiana, was presented to the Army Medical Museum by the widow of that distinguished microscopist. It has excited considerable interest among those who

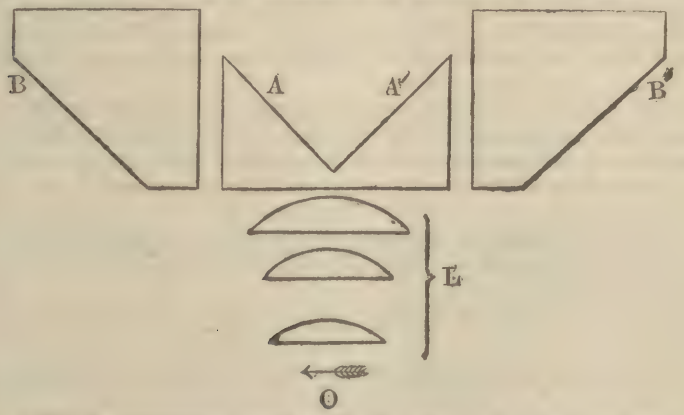


FIG. 32.– Arrangement of prisms above the objective in Riddell's first plan.

have examined it since that time, and I have been requested to make it the subject of a brief notice, which I have been the more readily induced to do, because, although the proper merit of Riddell as a discoverer in this connection has been handsomely acknowledged by such high Continental authorities as Harting and Frey, and even by some English writers,* it has been strangely ignored by others, and even so fair, and usually so accurate, an author as Dr. Wm. B. Carpenter has fallen into the error of asserting that "the first really satisfactory solution of the problem was that worked out by MM. Nachet;"* an error which is the more remarkable, in view of the manner in which Riddell's discovery was published and discussed in England, and of the use made of it by the opticians of that country.

According to his own account, the original binocular microscope of Prof. Riddell was devised during the year 1851, but it was not until the following year that it was actually constructed in a form available for use. October 2, 1852, he exhibited the completed instrument to the Physico-Medical Society of New Orleans, and described it in a communication published in the *New Orleans Monthly Medical Register* for October, 1852 (p. 4). According to that communication, the plan is essentially as follows: "Behind the objective, and *as near thereto as practicable*," (the italics are mine, J. J. W.), "the light is equally divided, and bent at right angles, and made to travel in opposite directions, by means of two rectangular prisms" (Fig. 32, *AA'*), "which are in contact by their edges, that are somewhat ground away. The reflected rays are received at a proper distance for binocular vision upon two other rectangular prisms" (Fig. 32, *BB'*), "and again bent at right angles, being thus either completely inverted, for an inverted microscope, or restored to their original direction. These outer prisms may be cemented to the inner, by means of Canada balsam, or left free to admit of "adjustment to suit different observers. *Prisms of other forms, with due arrangements, may be substituted.*" (Again the italics are mine, J. J. W.)

Prof. Riddell claimed that his instrument was "equally applicable to every grade of good lenses, from Spencer's best sixteenth to a common three-inch magnifier," and that it could be used "with or without oculars or erecting eye-pieces." He laid

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* P. Harting—*Das Mikroskop*, (I cite the 2d German edition), Braunschweig, 1866, Bd. I. S. 194; see also Bd. III. S 239: "Dem Nordamerikaner Professor Riddell gubuhrt das Verdienst, zuerst den wahren Weg angegeben zu haben, den man zur Erreichung dieses Zieles einzuschlagan hat."

H. Frey—*Das Mikroskop*, 5te Auflage, Leipzig, 1873. S 32: "Einem Amerikaner, Riddell, verdankt man die Herstellung der ersten Instrumente dieser Art;" i. e. truly stereoscopic.

Among the Englishmen, who have justly accorded to Riddell the priority belonging to him, I may mention with honor Samuel Homes—"The Isophotal Binocular Microscope," *English Mechanic and World of Science*, No. 800, July 23, 1880, p. 464—who, however, appears to have been unacquainted with Riddell's perfected instrument as described in this paper.

stress on the fact that a true stereoscopic effect was thus obtained: "It gives the observer perfectly correct views, in length, breadth and *depth*, whatever power he may employ; objects are seen holding their true relative positions, and wearing their real shapes;" but he laments that, "In looking at solid bodies, however, depressions sometimes appear as elevations, and *vice versa*, forming a curious illusion." October 1, 1852, Prof. Riddell sent a copy of the communication, he was about to make to the Physico-Medical Society, to the *American Journal of Science and Arts*, by which, however, it was not published till January, 1853 (Vol. XV, 2d Series, p. 68). From this it was reprinted in the *Quarterly Journal of Microscopical Science* for April, 1853 (Vol. I, p. 236).

On account of the pseudoscopic effect, which impaired the satisfactory performance of his instrument, Prof. Riddell soon acted upon his suggestion that "prisms of other form" might be substituted, and devised an improved arrangement by which that difficulty was completely obviated. The new instrument was exhibited to the New Orleans Physico-Medical Society, April 2, 1853, and described in a communication, an abstract of which was published in the *New Orleans Monthly Medical Register* for that month (p. 78). In this instrument but two prisms were used: "They must be of such form, that the faces, at which the light is immergent and emergent, shall form equal angles with the face on which the internal reflection occurs" (*loc. cit.*), and with this arrangement "to produce orthoscopic binocular vision, simple, not erecting eye-pieces are required." May 25, 1853, Prof. Riddell sent a copy of the abstract just cited to the *Quarterly Journal of Microscopical Science*, in which it was reprinted (Vol. I, 1853, p. 304).

July 30, 1853, Prof. Riddell exhibited this improved binocular to the American Association for the Advancement of Science, and made a communication on the subject, which was published in the Proceedings of the Association (Vol. VII, 1853, p. 16), and also in the *New Orleans Medical and Surgical Journal* for November, 1853 (p. 321). In this communication he began by describing and figuring the optical arrangement of his original binocular (Fig. 32, *supra*, is copied from this paper). He then pointed out that the pseudoscopic effects he had encountered, when this arrangement was applied to the compound microscope, were avoided, if it was employed without eye-pieces, and exhibited *a binocular dissecting microscope made in this way*, remarking: "In the smaller instrument before you this arrangement is observed. Used without eye-pieces, it gives a stereoscopic and perfectly satisfactory result. This instrument was constructed for a dissecting microscope. I use it with lenses, whether plain, doublets, or achromatics, from ½ inch to 3 inches

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· Wm. B. Carpenter—*The Microscope and its Revelations*, 5th ed., London 1875, p. 60.

focal length. The image is erect and orthoscopic." But, he adds: If over *B* and *B'*, single oculars be placed, the binocular vision is found to be pseudoscopic; that is, depressions appear as elevations and elevations as depressions. With erecting, or double eye-pieces, analogous to those of the terrestrial telescope, the vision again becomes orthoscopic. On this account I prefer to reserve this form of instrument for use without eye-pieces, in the manner described, and to construct the compound binocular microscope on a plan which I will soon explain."

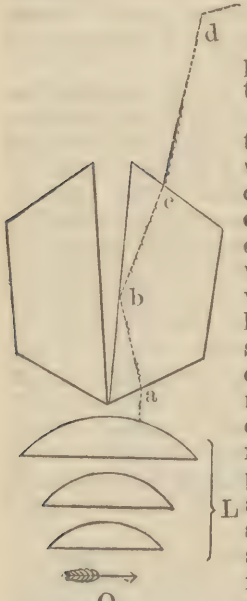


FIG. 33.—Arrangement of prisms above the objectives in Riddell's second plan.

This new plan was represented in the paper from which I cite by a cut, of which the annexed figure (Fig. 33) is a copy.

Immediately above the objective (*L*), two prisms are placed, on the long side of which total reflection takes place, the light on each side pursuing the path indicated on the right side by the dotted line *a*, *b*, *c*, *d*. "The light through the objective which impinges upon *a* is, that part of it which enters the prism, refracted to the left, so that it meets with the reflecting surface *b*. Suffering total reflection it emerges from the surface *c*, where, from the necessary identity of the immergent and emergent angles, it is refracted to the right, so as exactly to compensate for its previous refraction to the left." The equal angles, formed by the short with the long side of the prisms in this instrument, were actually 45°; the effect to be expected from other angles was discussed in the paper. The instrument was an upright one, and the two tubes were adjustable both at top and bottom, "so that their inclination to each other may be varied; and the whole arrangement slides at pleasure, horizontally, in order to adapt the distance to the eyes of different observers. Arrangements for adjusting the angle of the prisms to each other in accordance with the varying position of the two tubes were also provided.

In this instrument as the inventor pointed out, "orthoscopic vision is produced by the ordinary single oculars." As to the mode of illuminating the objects examined, he observes: "Opaque objects may be illuminated by the bull's-eye condenser; and transparent objects by two concave mirrors, aided by two diaphragms or screens, or one large concave mirror and two screens. At night two candles may be used conveniently with one mirror. To illuminate for the higher powers, a single achromatic condenser suffi-

ces.'" As the instrument was incapable of being inclined, two adjustable rectangular prisms were provided to fit over the eye-pieces, by means of which the image could be "viewed at any inclination between vertically and horizontally, which may be convenient to the observer." But these prisms had a further effect which Riddell did not overlook. He had observed that, although his new arrangement, used with ordinary eye-pieces, gave orthoscopic vision in the sense that the natural elevations and depressions in objects examined truly appeared as such, yet the image was erected in one plane, while in the other it was not; and he pointed out that the erection would be completed by the use of the rectangular prisms above the eye-pieces: It will be seen," he writes, that "'the prism at *A*" (one of the two just above the objective), "has the effect of erecting the image in one plane; while the small prism at *D*" (above the corresponding eye-piece), "can be placed so as to erect it in the plane precisely transverse. Thus the movements upon the stage will be seen through the instrument to be natural or erect."

The character of the binocular vision obtained by this instrument was described by Riddell in glowing language. As the observer gazes, the objects examined, "seemingly hung in mid air, stand out in all the boldness and perfection of relief, and definiteness of position in width and depth, which he has been accustomed to realize without glasses in the natural objects around him."

Riddell sent a copy of this remarkable communication to the *Quarterly Journal of Microscopical Science*, by which it was reprinted in the number issued in January, 1854 (Vol. II, p 18). Immediately after reading his paper to the American Association for the Advancement of Science, he requested the Grunow Brothers to construct for him a more finished instrument, on the plan of the working model of the improved binocular compound microscope then exhibited and described above. Mr. Wm. Grunow, of New York, in reply to an inquiry on the subject, wrote me, May 20, 1879, that this request was made of the Grunow Brothers, then in New Haven, Connecticut, in August, 1853, and that the instrument was finished and sent to him in March, 1854. This is the identical instrument presented by Mrs. Riddell to the Army Medical Museum.

Meanwhile the very first announcement of Riddell's discovery had attracted considerable attention, both in England and on the continent. Prof. C. Wheatstone, F. R. S., promptly sent to the Microscopical Society of London a paper "On the binocular microscope, and on stereoscopic pictures of microscopic objects," which was read April 27, 1853 (*Trans.*, Vol. I, 1853, p. 99). This distinguished gentleman, whose investigation of the subject of binocular vision is deservedly famous, had, when he wrote, seen only the reprint "in the last number of the *Microscopical Journal*" (*i. e.*, the number for April,

1853), of Riddell's paper in the *American Journal of Science and Arts* for January, 1853. He stated that he had himself long been convinced "that a binocular microscope would possess great advantages over the present monocular instrument;" and that, shortly after the publica ion of his first memoir on binocular vision in the Philosophical Transactions for 1838, he had "called the attention both of Mr. Ross and Mr. Powell to this subject, and strongly recommended them to make an instrument to realize the anticipated effect; their occupations, however, prevented either of these artists from taking the matter up." He further remarked: "The year before last, previous to the publication of my second memoir, I again urged Mr. Ross, and subsequently Mr. Beck, to attempt its construction, and for a short time they interested themselves in the matter, but ultimately relinquishd it for want of time, and in my opinion over-estimating the difficulties of the undertaking." He then briefly announces Riddell's success, adding: "The method Mr. Riddell employs is similar to the one I recommended to Mr. Beck."

After having thus claimed for himself the merit of Riddell's discovery, he endeavored to detract from its importance, remarking that "A binocular microscope is, however, by no means a novelty, and its invention dates nearly two centuries back," giving in substantiation of this statement an account of the double microscope of Cherubin (1677), to which I shall again refer further on. Subsequently, he discussed the question of the production of pseudoscopic effects with the binocular microscope, and observed: "The pseudoscopic effects when inverted images are presented, and the natural appearances when erecting eye-pieces are employed, have not escaped the observation of Mr. Riddell." He did not of course know that, when he wrote, Riddell had already perfected a method for overcoming this difficulty without "the use of erecting eye-pieces;" and such a possibility does not appear to have occurred to him.

Following close upon the communication of Prof. Wheatstone, a paper "On the application of binocular vision to the microscope" was read to the Microscopical Society of London by Mr. F. H. Wenham, May 25th, 1853 (*Trans.*, Vol. II, 1854, p. 1). Mr. Wenham cites the same paper of Riddell's that had arrested the attention of Wheatstone. He had of course been unable to see Riddell's instrument, but reports that he had carefully tried to reproduce it from the description, "and find that the prisms alter the chromatic correction of the object-glass, and also materially injure the definition." Not only did Mr. Wenham, according to his own account, fail to satisfy himself in his attempt to copy Riddell's original plan, but several modifications, which he himself devised, were tried "with no good result." On the whole he succeeded best when he "altogether dispensed with reflecting surfaces," and obtained bin-

ocular vision by placing an achromatic prism behind the objective, so as to act by refraction only. It is true, as he relates, that without employing erecting prisms, the use of which by Riddell he criticises, his arrangement would be "to some eyes pseudoscopic," but he suggests that "Probably habit would enable us to judge of their true form without being under the necessity of resorting to a special expedient for the removal of the deception."

In the Spring of 1854, Mr. Wenham having now read Riddell's description of his second plan, as reprinted in the *Quarterly Journal of Microscopical Science* for January, 1854, published an additional memorandum (Jour. cited. Vol. II, 1854, p. 132), in which he deprecated "the rather glowing account which the American Professor gives of the performance of his microscope," asserted (on the basis of his own failures, of course, for he had not yet seen Riddell's instrument), that—'The binocular microscopes up to the present time have done but little else than afford a glimpse of the splendid and substantial appearance that nearly all microscopic objects may be expected to bear when the instrument is brought near to a state of perfection," and naively declared, "I have abandoned all attempts at making a binocular microscope with two objectives, as I found that I could not get even a pair of 1/4's to bear upon the object together."

Mr. Wenham vainly continued his efforts to perfect a refracting binocular for several years subsequently, and as late as June 13th, 1860, read to the Microscopical Society, of London, a paper "On an improved binocular microscope" (*Trans.*, Vol. VIII, 1860, p. 154), in which he reports his success in obviating the pseudoscopic effect of his earlier instrument, by modifying the compound refracting prism in such a way that the rays passing through its right side were sent to the left eye, and *vice versa;* and claimed "that the *thinness* of the achromatic refracting prism gives it a great advantage in the quality of definition over the double system of reflecting prisms that has been produced."

How well this improved instrument performed I do not know, but it could not have been very successful, for less than six months later Mr. Wenham abandoned it for a simple and successful modification of the reflecting prism of Riddell. December 12th, 1860, he read to the Microscopical Society of London (*Trans.*, Vol. IX, 1861, p. 15), his paper "On a new combined Binocular and single microscope," in which he described and figured the binocular arrangement that has since been so generally connected with his name. In this arrangement a single reflecting prism only was used, which received the rays proceeding from one half of the objective; the rays from the other half proceeded without passing through any prism to one eye, while those which were intercepted by the

prism underwent in it two internal reflections, and emerged at such an angle as to reach the opposite eye. He obtained in this way a degree of success that, to use his own language, "considering the nature of the principle, could not have been anticipated."

Meanwhile the discovery of Riddell had attracted no less attention on the Continent of Europe. P. Harting, the distinguished Utrecht professor, relates (*Das Mikroskop*, Braunschweig, 1866, Bd. III, S. 239), that he no sooner read Riddell's article in the *American Journal of Science and Arts* (January 1853), than he wrote to Nachet, the well-known Parisian optician, and requested him to make one for him, but with a slight alteration, viz.: he desired that the two lateral prisms should be placed wider apart than Riddell had done, so that the instrument might be used simultaneously by two different observers, from which the Dutch professor frankly confesses he anticipated at that time more advantageous results than from stereoscopic microscopes. Nachet replied promptly that Riddell's discovery was already known to him, and that it had occurred to him also that the same principle might be used in constructing a microscope for two observers, as well as a binocular, but that he thought the same objects could be attained in a somewhat different way, and for this reason declined immediate compliance with Harting's request.

Nachet's object appears to have been in the case of the binocular to avoid the pseudoscopic effect of Riddell's first plan, and this in point of fact he achieved, though not until after Riddell had done so, in a different way; for, although his paper "On a microscope adapted for anatomical demonstrations; and on a binocular microscope," appeared in the same number of the *Quarterly Journal of Microscopical Science*, (Vol. II, 1854, p. 72), as Riddell's paper, yet this was not until nine months after the perfected instrument of Riddell had been exhibited to the Physico-Medical Society, and described in the New Orleans *Monthly Medical Register*.

For a precise description of Nachet's plan, I refer my readers to his paper just cited; the objections to it have been sufficiently discussed by Dr. Carpenter in his work on the microscope, (*op. cit.*, p. 61.) It certainly had the advantage over Riddell's first instrument of obviating the objectionable pseudoscopic effect, yet it did so on Riddell's principle—that is, by means of reflecting prisms—and not more efficiently than was done by Riddell's second instrument, which is also prior in date of construction to the instrument of Nachet.

It is clear, therefore, that Dr. Carpenter's affirmation, cited at the beginning of this paper, that Nachet's solution of the problem of stereoscopic vision with the microscope was the first satisfactory one, is true only, if Riddell's perfected instrument, which anticipated it in time, was so far inferior to it in

performance as to be fairly styled not satisfactory. So far from this being the case, however, I find the Riddell instrument, now in the possession of the museum, gives very satisfactory binocular vision indeed, and can only suppose that Dr. Carpenter has in some way failed to become acquainted with it, when I find him in the same work, and still without any reference whatever to Riddell, praising the excellent performance (*op. cit.*, pp. 64–5) of the erecting binocular microscope of Mr. J. W. Stephenson, F. R. M. S., which in its essential optical parts is a mere copy of Riddell's second instrument.

Mr. Stephenson's erecting binocular, as first made, was described by that ingenious gentleman in a communication read to the royal Microscopical Society, June 8, 1870, "On an erecting binocular microscope" (*The Monthly Microscopical Journal*) August 1, 1870, p. 61.' It will be seen, on examining this paper, that he obtained binocular vision by placing close behind the objective "two truncated rectangular prisms," which, as he describes and figures them, are not only identical in form and function, but are of almost precisely the same size (compare Fig. 1, illustrating his paper with Fig. 33 in this paper), as those of the second instrument of Riddell. But the American microscopist is not even mentioned, either in this or in his second paper by Mr. Stephenson, who explains that, in the truncated prisms thus used, "the dispersion caused by refraction at the first" is "corrected at the second transmitting surface," without apparently being aware that Riddell had already pointed out this mutual compensation of the two refractions in the same arrangement of prisms in his paper read at Cleveland in July, 1853.

Like Riddell, Mr. Stephenson perceived that, by the use of the two truncated rectangular prisms alone, the images of objects seen were laterally erected; and like Riddell he proceeded to complete the erection by the use of another rectangular prism, placed above the first pair in such a position as to effect a second lateral erection at right angles to the first. I have pointed out that Riddell attained this object by placing a small rectangular prism above each eye-piece, and those prisms being movable, the observer could look through them at any desired angle, although the tubes of the microscope remained vertical. Mr. Stephenson, however, placed his additional rectangular prisms immediately above the first pair, and made it so large that a single prism answered for both tubes; at this point the two tubes carrying the eye-pieces were inserted into the upright tube containing the prisms at an angle of 75°, which he thought the observer would find "with this stand as convenient as any."

This arrangement, however, was of course less perfect than Riddell's use of two rectangular prisms, one for each tube, would have been, and Mr. Stephenson soon perceived this, for in a subsequent paper, read to the Royal Microscopical Society,

March 6, 1872 (*The Monthly Microscopical Journal*, April 1, 1872. p. 167), he described several improvements in his instrument, one of which was that he cut his large third prisms in half, and cemented the two pieces together "at such an angle that the light enters and emerges at right angles to the surfaces," instead of obliquely, as it did in his first instrument; thus making his arrangement optically the same as Riddell's, except that the upper rectangular prism of each tube was below the eye-pieces instead of above it.

He also modified the angle at which his two tubes were inclined, to the optical axis of the objective, making it 66½° instead of 75°, and he made the pair of reflecting prisms next the objective very much smaller than he had done before; indeed "their dimensions are so far reduced that they are capable of being inserted into the object-glass itself; this is accomplished by placing them in a small brass tube, which is fixed in and projects beyond the nozzle of the instrument, but without in any way affecting the screw." This last alteration was undoubtedly a real improvement on the original instrument of Riddell, and greatly benefits its performance with the one-fourth and one-eighth objectives; but it was after all merely carrying out Riddell's principle, cited above, that in obtaining binocular vision with the microscope, the reflecting prisms should be placed behind the objectives, and as near thereto as practicable."

For this improvement in the mechanical construction of the instrument, and for any advantage that may result from placing the second pair of reflecting prisms below the eye-pieces, instead of above them, I am quite ready to accord full credit to Mr. Stephenson: but it is quite clear from the facts recorded in this paper that, with these exceptions, the whole credit of the optical part of his "erecting binocular" belongs to Riddell. I do not, of course, accuse Mr. Stephenson of intentional wrong, in arrogating to himself the merit that really belongs to the American microscopist who so long anticipated him; but it has been his misfortune to forget, or not to have become acquainted with, the widely published work of his predecessor; and it has become my duty to vindicate the truth of history, as I have done in these pages. I do not doubt that Mr. Stephenson, after taking the trouble to read Riddell's papers as reprinted so many years ago in the *Quarterly Journal of Microscopical Science*, will hasten to accord full credit to Professor J. L. Riddell, whose principles and methods he has so fruitfully followed.

Meanwhile the original device of Riddell which, as we have seen, he himself had pointed out at the Cleveland meeting, gave orthoscopic vision when used without eye-pieces, was brought much earlier into general use. The optical parts of the binocular dissecting microscope then exhibited by him have been strictly copied in the binocular dissecting microscopes

made since by Nachet of Paris, and at a later period by R. and J. Beck of London, both of which are still deservedly.

Dr. Carpenter, in the work I have cited, gives an excellent description of the optical arrangement of this instrument, which, however, he erroneously credits to Nachet (*op. cit.*, p. 84), and remarks: "To all who are engaged in investigations requiring very minute and delicate dissection, the author can most strongly recommend MM. Nachet's instrument" (*op. cit.*, p. 85). I agree perfectly with this opinion, but "Nachet's instrument" is simply a copy of Riddell's. To Mr. R. Beck Dr. Carpenter ascribes (*op. cit.*, p. 83), a different arrangement, in which two of Riddell's four prisms only are used to bring one-half the cone of rays from the objective to one eye, while the other half of the cone reaches the other eye without the interposition of any prism. To this arrangement, Dr. Carpenter says, Nachet's (that is Riddell's) is greatly superior. The Becks appear to have arrived at the same opinion, for a binocular dissecting microscope purchased of them for the Museum about ten years ago, is made strictly after Riddell's pattern.

Nachet, certainly at least, deserves the credit of having highly appreciated this first plan of Riddell, for he not merely employed it for his dissecting microscope, but extended its usefulness by applying it to the ophthalmoscope, thus obtaining binocular vision with that instrument. The binocular ophthalmoscope of Murray and Heath is also made on the same principle, differing only in the mechanical contrivances employed. (See A. Zander, *The Opthalmoscope*, translated by R. B. Carter, London, 1864, p. 58, *et seq.*)

One word before concluding, with regard to the remark of Professor Wheatstone, who, as we have seen, declared after reading the reprint of Riddell's first paper, that a binocular microscope is "by no means a novelty, and its invention dates nearly two centuries back." The true history of these early attempts will be found in the early work of Harting (*op. cit*, Bd. III., S. 101 *et seq.*), from which it would appear that the binocular microscope of Cherubin (1677) was preceded by one invented by Lippershey (1609), and another by Antonius Maria de Reita (1645), and followed by others described in the works of Zahn (2d ed., 1702) and Bion (3d ed., 1726). Harting has correctly pointed out (*op. cit.*, Bd. III., S. 239), that the plan employed in all these earlier attempts was simply to fasten together two separate microscopes in such a way that they could be looked through simultaneously with both eyes; a plan which was necessarily limited in its application to very low powers, even when the adjoining lateral portions of the two object glasses were cut away so as to allow their closer juxtaposition, as was done by Cherubin.

With these earlier efforts, therefore, the discovery of Riddell has nothing in common. He undoubtedly deserves the credit of having discovered and first published the optical

principle, on which all the most successful binoculars made prior to the present year depend. He first showed that the cone of rays proceeding from a single objective may be so divided by means of reflecting prisms, placed as close behind the posterior combination of the objective as possible, that orthoscopic binocular vision can be obtained both with the simple and the compound microscope; and this principle, whether carried out as he himself did, or in the slightly modified manner adopted by some of those who have attempted to improve upon it, has been until the present year the only plan upon which really satisfactory binocular microscopes have been constructed.

The remarkable paper recently published by Prof. E. Abbe of Jena ("Beschreibung eines neuen Stereoskopishen Oculars," *Zeitschrift für Mikroskopie*, 2te Jhrg, Heft 8, 1880, S. 207; also this *Journal*, p. 201), marks a new era in the history of the binocular microscope. Abbe secures binocular, but not stereoscopic vision, by means of reflecting prisms, and then obtains the stereoscopic effect, which can be made at pleasure either orthoscopic or pseudoscopic, by merely cutting off with suitable diaphragms the outer or inner halves of the cone of rays above the eye-lens of each eye piece. I have every reason to believe that his instrument (which I have not yet had the pleasure to see, although I have sent for it) as manufactured by Carl Zeiss of Jena, will be an improvement upon the binocular at present in use with the compound microscope. But however this may turn out, the arrangement devised by Riddell, for the dissecting microscope, can hardly be superseded; and even with the compound microscope his plan, or some of its modifications, will probably continue to be employed to a certain extent.—*Am. Monthly Microscopical Journal, Dec.*

ANTHRAX.

J. T. WOODS, M. D., Toledo, Ohio.

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Reports in medical journals during the past few years, show that the use of a dilute solution of carbolic acid has been resorted to as an external application, with a view to the allaying of pain, and one enterprising experimenter went so far as to insert cotton pledgets containing this panacea into the openings through the skin. All these experiments present most flattering results. The application to the skin to me seemed frivolous, while theoretically the introduction of the acid within suggested positive action.

It is now about two and a half years since a patient presented with two carbuncles, one on the back of the head, the other below it on the neck. They were of moderate size only, the upper one open in three places, while in the lowest the skin was unbroken.

Having considered the various known properties of the carbolic acid, I determined to use it vigorously instead of inserting it in meagre quantity. I loaded my hypodermic syringe and, passing the point through the openings and into the sloughing mass in every direction, I completely saturated it with the pure acid and awaited results. In a minute the smarting disappeared, and with it all pain and all sense of soreness.

By this result emboldened, I again charged my instrument and, thrusting it through the skin over the other carbuncle in a variety of places, I soaked the whole carbunculous mass beneath the skin, enough of necessity escaping to fully bathe the borders, modify inflammation and destroy any septic elements then developed. I waited not without concern, and was delighted to learn in a few moments that all the pain and soreness was gone in this also. The skin over the mass became quickly white, hard, and dead, and in a few days detached in the form of a slough: the interior mass also becoming rapidly loosened, only requiring the cutting off of a few shreds to remove it, when the cavity was found to present a satisfactory appearance and rapidly filled up, leaving an exceedingly small cicatrice. The remarkable feature in this case was that, after the complete saturation of the carbunculous mass, no pain occurred, my patient going about his ordinary labor without discomfort. It is now one year since I treated a very painful case, the same method bringing about similar results, the party suffering no pain or even soreness after the lapse of one minute following the injection.

In making this suggestion, which so far as I know is new, I am conscious of the insufficiency of my cases, but I am so sure of its efficacy that I shall at once resort to it when case and occasion offer, and advise others to do so, at least until the value of the measure is determined.

In conclusion, I would advise the use of the pure acid only, and to complete saturation. Dilution would increase, if not create danger of absorption of the acid, converting a very simple procedure into a condition of great danger and insufficient quantity defeat the purpose for which it is used.—*Toledo Medical and Surgical Journal,* December.

EXPERT TESTIMONY IN TOLEDO.

Much has been written on this subject during the past few years, and much discussion had, but until recently no one has been found who had the courage of his convictions to bring the matter to a test.

In a case recently tried in this city, State vs. Hakeos, indicted for the killing of one King by a pistol-shot, Drs. Bigelow and Brigham attended the wounded man, and after his death made the post-mortem examination for the coroner. Being subpœnaed as witnessess for the State, they gave testimony to

all things of which they had knowledge, but being interrogated as to what, in their opinion, was the cause of death, they asked to be excused on the ground that this was expert testimony, and that they had not been paid, nor were to be paid as expert witnesses. The following is the account of the proceedings as reported stenographically in the *Telegram* of Dec. 4. The witness is Dr. Brigham, but the facts are equally applicable to Dr. Bigelow, who was on the stand the previous day:

Mr. Ford—Doctor, from your observations at the office and at the house, and from your previous medical experience, what is your opinion of the cause of the death of this man King?

Witness—That is a question I do not see that I must answer.

Mr. Ford—What are your grounds for wishing to be excused?

Witness—Well, it is an opinion that demands a good deal of consideration.

Mr. Ford—You got paid by the county for making a post-mortem examination, did you not?

Witness—I haven't got the pay yet. (Laughter.)

Mr. Kennedy—If we are entitled to an answer, we'd like to have it in the present case and at the present time.

The Court (Judge Rouse)—We are now asking what was the cause of the death of this man. Now the truth is, all the facts have been given in the case that came under the witness's general attention. You now want to ask him of his opinion. Suppose he were to state his wound were not the cause of the death of the boy, would any one believe him? Now this matter is for the jury to determine. They have the facts before them. This question is one that may be asked, and it is a legal question. But it is calling upon these gentlemen for their opinion, which is the result of money and study and deep thought for many years, and asking them to do all this for a mere pittance of seventy-five cents a day. It is wrong, there is no question about it. Practically, they are right. The law has not provided for this thing, it is a *casus omissus;* it is a thing which, if the attention of the Legislature had been directed, would have been provided for, because it is just and right. There is no more right in calling upon these medical gentlemen for their years of labor and study and expense, than there would be to call upon a lawyer. Now suppose a man has an important matter on which he wants advice, and takes it to one of the lawyers here, and says: "I want your legal opinion;" is there any respectable lawyer who would consent to look after this matter without charging for giving his opinion? Well, now, it is precisely that sort of opinion that our medical men are called upon to give. They are entitled to fair and respectable compensation for that opinion, and they ought not to be compelled, in my view, to give the result of their observation and thought, and when it comes from all these years of labor.

I therefore will not force that question unless the witness sees fit voluntarily to answer it. In this instance the power of the law might be used, but it would be to do what is substantially wrong, asking from a man a thing that is valuable and that there is no compensation for. I will therfore leave the matter, so far as opinion is concerned, with them.

Mr. Kennedy—We have no objection to the doctor being paid for his evidence.

The Court—Neither the prosecution nor the court have any power over the public treasury.

Mr. Kennedy—It is a question we have a right to demand an answer to, and a right to ask.

The Court—It is a question you have a right to ask; but I will not use the arm of the law, under the circumstances, to compel an answer to it.

Mr. Ford—I wish to say a word on this point.

Of course this is an important matter as far as the administration of public justice and law is concerned. Mr. Kennedy and myself are simply agents of the State in this case, and have to discharge a duty toward the public, and deeming this an essential ingredient to make out this case, we feel we cannot discharge our duty to the public without insisting on an answer to this question. And I would have it understood that if the case fails, and if justice is not done, the responsibility rests, not upon us, but upon the decision made by the court.

The Court—You are simply doing your duty, gentlemen, in asking the question, and it is a proper question; but I will not compel an answer by using the arm of the law in the case until such action as the Legislature may see fit to take on the matter.

It will thus appear that the witnesses owed their immunity from committal for contempt to the leniency of the court, who, in our judgment, took the only rational and just view of the question. It is true that, in all probability, the opinions of these witnesses as to the cause of death could could have had no weight with the jury. It does not require a professional or scientific dictum to make it apparent that a pistol bullet which perforates a man's abdomen from back to front and spills the contents of the intestines into the peritoneum, is the cause of that man's death. The fact that his assailant was promptly found guilty by the jury, is conclusive on that point. How far the judge's desire for fair dealing might have carried him if the case had really required such elucidation as only expert testimony can furnish, remains an open question. At all events, the principle, as expounded by the honorable court, is a just one, and we wish to express our indebtedness to Drs. Bigelow and Brigham for its eduction.—*Toledo Medical and Surgical Journal*, December.

PASTEUR'S EARTH-WORM THEORY.

A provincial contributor to an English agricultural journal, writes an amusing letter concerning the recent charges advanced against the lumbricus terrestris by Pasteur, who, claiming that this animal constituted the medium for the conveyance of the anthrax-bacilli, drew fifty thousand francs from the French treasury, to enable him to follow up this discovery, and has not yet fulfilled his promise of demonstrating its special value. The correspondent in question calls attention to the great agricultural importance of earth-worms, which annelides, according to Darwin, annually bring 160 tons of earth to the surface area of every ten acres, and mediate that constant change of the soil which is a condition of its fertility. The gentleman referred to seems to be anticipating that Pasteur will follow up his alleged discovery with an onslaught on earth-worms. A moment's reflection will show, however, that even if Pasteur's view be correct, it will never be possible or profitable to exterminate these humble grovellers of the soil. A very strong acid might possibly affect their destruction, if simultaneously used over the entire face of this planet, for a period of two years, provided its penetration to a depth of fifteen or more feet could be secured. This plan would have the advantage of being radical enough, and would exterminate all other possible bearers of contagion at the same time. Any other plan we should protest against as imperfect, for in attaching as much value as he does to the earth-worm, M. Pasteur has forgotten the well-established fact, that other animals, such as rats and moles, are frequently the bearers of the contagion, and the observation made previous to the recent oriental plague, that rodents, and frequently larger animals, were found dying in large numbers before the human inhabitants of the country were attacked. Thus far the only practical outcome of Pasteur's discovery is the lesson it teaches of the advisability of burning the cadavers of diseased animals. And this lesson had been inculcated and appreciated before the appropriation of the said fifty thousand francs was made by the French chamber of deputies—*Chicago Medical Review*, January 5th.

ACTION OF BROMIDE OF POTASSIUM.

Maragliano has found, by employing the method of cranial thermometry, that bromide of potassium, in doses of thirty to fifty grains, contrary to the usual theories of its action, causes a rise of temperature, at least on the outside of the cranium. This rise amounts on the average to about one degree centigrade; it reaches its acme in about an hour and a half and declines again in two or three hours. Simultaneously with this there appears a slight rise of two or three-tenths of a degree in the axilla. It is of course open to question, especially after the publication of Franck's researches, whether the temper-

ature or the changes of temperature on the external surface of the head, represent approximately similar conditions of the brain or not. There does, however, seem to be some clinical evidence that there is a connection between external cranial temperature and intra-cranial changes, and if this rise following the ingestion of bromides really means an increase of cerebral circulation, then a popular theory of its action will have to be given up.—*Chicago Medical Review*, January 5th.

POISONOUS PIGMENTS.

All the diseases which are caused by coloring matters cannot be charged to the account of arsenic. Since it has been discovered that every shade of color may be secured from coal tar, arsenical pigments have almost fallen into disuse. It is of the highest practical importance to physicians, especially those in cities, to be informed respecting the innocent or noxious effects of pigments in common use, since such pigments are almost wholly derived from coal tar products. The information desired is found in a late work by Dr. Grondhomme, entitled "Die Theerfarben der Herren Meister, Lucius und Brüning, zu Höchat am Main in Sanitärer und Socialer Beziehung," Among the raw materials employed in this extensive establishment, it is found that benzol is poisonous. When its vapor is inhaled, it produces irritation of the nervous centres, dizziness, ringing in the ears, nausea and drowsiness. Naphtholin is apparently harmless. Anthracen has an irritating effect on the mucous membranes, but does not produce any serious results. Nitrobenzol produces difficulty of breathing, dizziness, drowsiness, tonic and atonic convulsions, ending often in general paralysis and death. The symptoms often are not manifested until twenty-four hours after the poison has been taken. Forty-four cases of acute poisoning from nitro-benzol, fourteen of which proved fatal, have been recorded in medical journals. Aniline is undoubtedly poisonous. Of the common dyes derived from the above substances, it is found that rosaniline, even when prepared with the aid of arsenic, is harmless. Magenta, which has been credited with highly poisonous properties by many medical journals, is found to be harmless. The cases of poisoning of the legs from stockings colored with magenta, have all arisen from arsenic. Pure magenta will cause neither eczema nor erythema, neither does it tend to form albumen in the urine, as has frequently been charged. Eosin and erythrosin are perhaps slightly poisonous. Naphthol colors are harmless. Alazirin causes a slight irritation of the skin. The factory of Meister & Co. employs over one thousand persons. Not more than three per cent. of the sickness among them is caused by the coal-tar products. Certainly, if these are so harmless to the manufacturers, our women and children will not suffer greatly from wearing clothes that have been dipped in these

dyes. The Chemical News is quite right when it says: "If writers and lecturers who wish to organize a crusade against poisonous colors will consult Dr. Grondhomme, it will enable them to add knowledge to their zeal"—*Chicago Medical Review*, January, 5th.

SUPPLEMENTARY NOTE TO THE NOTICE OF "RIDDELL'S BINOCULAR MICROSCOPES." *

By SURGEON J. J. WOODWARD, Bt.-Lieut. Colonel, U. S. Army.

I have just received from my friend, Mr. John Mayall, Jr., a note calling my attention to a partial acknowledgment of the priority of Riddell made by Mr. J. W. Stephenson in a communication to the Royal Microscopical Society, June 4th, 1873.

I regret very much that this acknowledgment should have entirely escaped my notice, and hasten to give it equal publicity with my paper. (This Journal, Dec., 1880, p. 228.) It will be found in the Report of the Proceedings of the Royal Microscopical Society for June 4th, 1873 (*The Monthly Microscopical Journal*, Vol. X, 1873, p. 41), in the following words: "Mr. J. W. Stephenson said he took the present opportunity of stating that, to his surprise, he found that the mode of dividing the cone of light in his erecting binocular microscope by means of two prisms was used by Professor Riddell, of New Orleans, in the year 1853, in his form of binocular. The arrangement of that instrument differed from his own in the following respect, viz.: that his (Mr. Stephenson's) prisms were so placed that, combined with the reflecting plate above they acted as an erecting instrument, and by entering into the cell of the object-glass could be used for high powers whenever required; whilst those of Professor Riddell were placed above the object-glass simply to produce binocular effect. He had only just heard of this through the kindness of Mr. Frank Crisp, and he took the earliest opportunity of notifying it to the Fellows of the Society."

But while hastening to give due credit to Mr. Stephenson for this acknowledgment, I cannot but express my surprise that, so late as 1875, Dr. Carpenter, in the work cited in my paper, should have continued to give the credit of Riddell's invention to Mr. Stephenson; nor am I less surprised that the latter gentleman, after his attention had been called to Riddell's invention by Mr. Crisp, should have studied it so imperfectly as to have overlooked the upper prisms, by which Riddell's microscope also "acted as an erecting instrument" so many years before. The arrangement of Mr. Stephenson by which his prism "entering into the cell of the object-glass could be used for high powers whenever required," is, as I pointed out

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* See this Journal, December, 1880, Vol. I, p. 221.

in my paper, a real improvement on Riddell's instrument, for which I have already given Mr. Stephenson full credit.—*Army Medical Museum*, January 18th, 1881.—Ibid., Feb.

COCA IN THE OPIUM-HABIT.

By P. R. HENDERSON, M. D.

Several months ago I noticed an article by Dr. Palmer, recommending "coca as a possible cure for the opium-habit;" and as I had under treatment at that time a case which had resisted ordinary treatment, I determined to give the coca a trial. I did so, with the following results:

R. T. P. had for several years taken large doses of laudanum several times a day for what he called "disease of the stomach." Was always complaining, and was low-spirited, sallow, poor, and a dejected, lifeless-looking creature generally. He often took as much as a pint of tincture of opium per week, and suffered intensely when without it even for a short time. As he said, his disease returned as soon as the laudanum gave out. I told him I at last had found a cure for his "stomach disease," and ordered the coca to be taken in dram doses as often as he felt the disease returning, or whenever he felt that he could no longer do without the laudanum. He used it frequently for two or three days, but gradually lessened the dose and frequency until cured. Since his cure he has rapidly improved in health and strength, both mental and physical; in short, he is a new man.—*Louisville Med. News*, Dec. 4th.

A PHYSICIAN'S PROBLEMS IN PSYCHIATRY.

By DR. C. H. HUGHES, of St. Louis.

Psychiatry is pre-eminently a practical subject. Comparatively few general practitioners have had adequate opportunity afforded them of practically studying this disease. The protean phase of mental alienation is mainly to be seen under the present methods of treating the insane in the hospitals. This fact adds perplexity to the mode of properly treating and disposing of insane persons when we encounter them in general practice. When in the course of physical disease mental alienation, either alone or jointly with another organ, supervenes, the absence of that clinical experience which comes from daily intercourse with the insane and daily observation of the disease, and which usually enables the general practitioner to make a prompt and satisfactory decision in diseases he is accustomed more often to encounter, is likely to occasion every kind of hesitation and indecision. This often results in too hasty and indiscriminate consignment of patients to State hospitals. How can a physician determine when a given case can be safely treated at home? To determine this properly,

the physician must ascertain whether the patient is homicidal, suicidal, violent or destructive in any way to the person or property of others, or to himself, beyond the likelihood of ordinary home vigilance to prevent or circumvent, and he must also determine whether the patient is in imminent danger of becoming so. Is the patient so indecent in his habits, conduct or language or ordinary proprieties of life as to render it unfit for him to remain long at home? What antipathies has he formed? Is there danger to wife, husband or children, or is their presence detrimental to his mental welfare? Can he be treated safely by medicine alone? Was the insanity caused or is it aggravated by any circumstances surrounding him? What is the pecuniary condition of the family? And many other practical questions are to be solved.

Sufferers are sometimes sent to the asylum too early and sometimes too late. There is great need of a more general knowledge of psychiatry out of the asylums. In no class of affections is it so imperatively necessary to encourage the importance of early and prompt treatment, as in diseases of the brain affecting the mind. Among the cases which I have seen too soon or needlessly sent to the asylum are, first, puerperal insanity, during the first six weeks, in consequence of parturient shocks, exhaustive discharges and inadequate nutrition. (And let me say here, in parenthesis, that the frequent low nutrition during the post-parturient period is largely responsible for cases of hopeless insanity.) The post-pasturient woman's condition cries most loudly for nutrition for healing and repair. A nutritious, non-stimulating diet never harmed anyone, and I do not believe a single physician, when he is sick, practices what some of them preach on that subject. The second class is that of insanity of utero gestation. This kind of insanity ought to be kept in abeyance until the critical period has passed, but requires careful watching and treatment. Then we have the insanity of lactation, which may usually be averted or arrested in its incipiency by weaning the child and taking it away from the mother and supplying other nutrition, securing private sleep every night, quiet during the day, by means of maltine preparations, and the best possible non-stimulating nutrition.

Then we have general paralysis of the insane. These patients, being never cured, and generally as happy in one place as another, and seldom dangerous, may be treated as well at home or by traveling as elsewhere, providing they submit without annoyance and danger to themselves or their property or to others. In cases of acute psychic disturbance, secondary upon temporary hyperæmia, where the patient is conscious something is wrong, and will receive treatment, he may be treated at home. These cases, however, require great vigilance, if they have any delusions or suspicions that may lead to homicide or suicide. Delusions and hallucinations

based upon auditory diseases render these cases generally unsafe to be treated at home. The advice that is to keep these patients out of the asylum should be cautiously given, and based upon ample means of the friends to keep the patient under constant control. Then we have cases of delirium tremens, mania a potu, which may soon be restored by judicious treatment familiar to every physician. Then I proceed to senile dementia, a case of harmless insanity in an old man, a loss of mind which comes from those degenerate changes familiar to us all. No medical man who justly appreciates his position would consign such a patient to the hospital, if it be within the power of the family to take care of him. Then insanity connected with far advanced phthisis, unless violent and destructive, is a form not proper to be sent to an asylum. Mild cases of melancholia, where the patient can afford the expense of a medical attendant away from his immediate home, should not be sent to the asylum. These cases are, however, sometimes the most treacherous ones the physician encounters. It is out of them that the daily harvest of suicides is largely made up. These apparently harmless melancholics are the ones whom the physician interrogates with the greatest care. They are not safe either for the physician or for the friends to be treated at home.

In the new era in medicine now inaugurated by the creation of chairs in psychological medicine in the medical colleges, and the disposition to diffusion of the literature of insanity through the medical profession generally, we shall soon be quite as well qualified to intelligently advise concerning insanity as concerning other diseases. I have more than once seen patients, who, at home, had given the greatest trouble, when no one at home had the temerity to dare tell him he was insane, cured by telling him candidly that he had been adjudged by a jury to be insane, and was now in an institution provided by the State for the cure of the insane, and that he, although in a different degree from the others around him, was no less insane than those about him.

The important problem in psychiatry, for forensic purposes, is that of differentiation.

[The paper closed with a discussion of the rights of the insane, in which the author maintained the general principle that "no man of unsound mind should be divested of his liberty, unless he was dangerous to himself or others."] — *Cincinnati Lancet and Clinic*, Dec. 4.

PASTEUR'S DISCOVERY OF THE "VACCINE" OF FOWL-CHOLERA.

M. Pasteur has at last made known the method by which he claims that the virus of fowl-cholera can be modified so as to produce a morbid disease which has the same protective power against the original disease that vaccinia has against

small-pox. M. Pasteur's communication on the subject is of extreme interest, on account of the bearing which the alleged discovery has to all infectious diseases. Fowl-cholera itself is not a disease of much consequence; it is not a cholera at all, but is a highly virulent blood infection, characterized chiefly by fever, swelling of the cervical lymphatics, pericarditis, and duodenal congestion or inflammation. Its termination is frequently fatal, but not necessarily so, and the poison seems to differ in the degree of its virulence at different times. The special poison of the disease, according to Toussaint and Pasteur, is an oval-shaped micro-organism about $\frac{1}{10,000}$ of an inch in diameter. This organism can be easily cultivated in certain media, such as decoction of muscle; and it was by cultivating it in these media that Pasteur obtained the results he now announces.

In describing his investigations, the facts of the variable intensity in the symptoms and course of the different infectious diseases is referred to. It being admitted that such a variability does exist, the problem proposed by the experimenter was to take the infective organism in cases of virulent fowl-cholera, and try whether by artificial cultivations the intensity of their effect could not be diminished. It was found that if these micro-organisms were subjected to numerous cultivations immediately succeeding each other, the virulence was not at all diminished; but if the intervals between the cultivations were prolonged, a gradual diminution in intensity did take place. Thus, for example, the germs from a very malignant case may be placed in a muscle decoction, and there allowed to multiply. Multiplication having ceased, the decoction is allowed to stand for two months; some is then taken and placed in fresh culture-fluid, where growth and multiplication again occurs. Now while the inoculation of the first decoction will kill ten chickens out of ten, and that in a sudden manner, the virus of the second decoction does not kill all, or at least it will have lost its *foudroyant* character. If the time between the successive cultivations is extended to six, eight, or ten months, the virulence of the poison continues to become weaker, until it finally causes simply a mild disease that does not injure the fowl, but protects it from the effects of any further inoculations, even with the freshest and most virulent organisms.

This is M. Pasteur's method of obtaining the protective virus of fowl-cholera.

The next question which he proposes is: What is the agent that causes this progressive diminution in the intensity of the special poison? He found cultures which were kept preserved from the atmosphere in hermetically closed tubes did not lose their virulence in the least, although preserved for ten months in this manner. Cultures from the same source, that were exposed to the air, gradually lost their strength, as has been described. M. Pasteur finds in this fact a clear demonstration

that it is the oxygen of the air which weakens or extinguishes the virulence of the poison; and he believes further that this is not merely an isolated fact, but possibly the grand principle that to this influence is due the modification and limitation of great epidemics.

This, as well as the other of M. Pasteur's communications on the subject of fowl-cholera, read very much like a romance. It must be said, however, that he is not alone announcing discoveries of the kind just described. M. Toussaint states that he has been able to modify the poison of anthrax, so that after its inoculation in healthy animals a morbid action is produced which removes the susceptibility to the original poison. Only in M. Toussaint's case the alleged infective germs were removed from their fluid medium, instead of being cultivated in it. He took the blood of animals affected with anthrax and destroyed the organisms in it by filtration and carbolic acid. He then injected the filtered fluid into healthy animals, and found them protected by it against the anthrax.

Similar experiments with the virus of splenic fever have been made by Dr. Burdon-Sanderson and Dr. Greenfield. The latter showed that if a guinea-pig be inoculated with the blood of a heifer suffering from splenic fever, the former animal takes the disease. Then, if the blood of the guinea-pig be inoculated in a healthy heifer, it will protect that animal against splenic fever. Still other experiments by Buchner and by Koch, showing the apparent possibility of changing by cultivation the supposed specific properties of micro-organisms, have been made.

All these investigations have led their authors to conclusions which, if correct, are of a vast importance to pathology as well as to practical medicine.

While hoping that these experimenters are not deceived, we cannot but remember that the history of specific germs is full of the wrecks of brilliant hypothesis. From Hallia, with his rice-fungus, to Oertel, with the diphtheria spores, the story has been one of laborious experiment, alluring theory, then refutation and final collapse. There is a remarkable medico-geographical fact also in this connection. It is said that all the specific micro-organisms, except a few in Ohio, live on the other side of the Atlantic and cluster around the laboratories of a few pathologists. Therefore it is not surprising that some incredulity be shown toward specific germs, in whose geographical distribution there is shown such a conpicuous bias.—*Med. Rec. Dec.* 4.

FETID SWEATING OF THE FEET.

A simple and effective method of dealing with that annoying infirmity is suggested by a correspondent of the *British Medical Journal.* He says:

All that is necessary is to strap the effected portions of the sole of the foot as smoothly as possible with tolerably wide straps of ordinary adhesive plaster—either emplastrum saponis or emplastrum plumbi. Every part should be completely covered, and with two layers of plaster if the complaint be very bad. The plaster should be taken off and renewed in three or four days, and once again at the expiration of a week, when the skin will be found to be quite healthy, having its normal yellowish appearance, and will also be quite dry. The odor ceases from the first application, and the patient will walk away in comfort. One may with confidence predict, even in the most severe case, a perfect cure in the time mentioned.

There seems to be in some persons a tendency to relapse after an interval of some weeks; but on the slightest sign of reappearance of the disease, it is only necessary to cover the patch with a single strap of plaster, which will at once arrest its progress, remove the fetor, and speedily exert its curative influence.—*Medical and Surgical Reporter*, December 4.

RESULTS OF MARRIAGES WITH IDIOTS.

Dr. Berkhan, in the *Zeit., für Psych.*, Vol. 37, makes some interesting observations as to the capabilities of microcephalic and other idots to propagate their species. A semi-idiotic man has been married for some years to a healthy woman; there is no family. A healthy man, married to an idiotic wife, has had three children by her; two of them are idiots. These cases support Vogt's view, that while female idiots may bear children, the males are very frequently incapable of begetting them. Marriages are very rare between male half-cretins and healthy women, but are not uncommon between healthy men and semi-cretinous females who may happen to own a little property. The author has never seen the progeny of these marriages arrive at maturity; if not still-born, the children usually die during childhood.—*Medical and Surgical Reporter*, December 4.

THE LARGEST MAN IN AMERICA.

The largest man on this continent was the late Lewis Cornelius, of Pike County, Pa. He was considerably larger than Daniel Lambert. Mr. Cornelius' dimensions are entered upon the record books in the Prothonotary's office at Milford, Pike county, as follows:—

"Lewis Cornelius—Born 1794.
"Height, 6 feet.
"Circumference below waist, 8 feet 2 inches.
"Circumference above waist, 6 feet 2½ inches.
"Circumference of arm above elbow, 2 feet 2 inches.
"Circumference of arm below elbow, 1 foot 9 inches.
"Circumference of wrist, 1 foot 3 inches.

"Circumference of thigh, 4 feet 2 inches.
"Circumference of calf of leg, 2 feet 7 inches.
"Circumference of ankle, 1 foot 7 inches.
"Weight, without any clothing whatever, 645½ pounds.

This is the only authentic record of Mr. Cornelius' size extant. As he had been sick some time, he lost over 50 pounds of his weight. He was not weighed until after his death, and when in full health would have tipped the scales at 700 pounds. His wife was a very slight woman, and weighed just 100 pounds.—*Medical and Surgical Reporter*, December 4.

MEDICAL JOURNALS OF THE WORLD.

Of these, France and her colonies possess 147, of which 95 are published in Paris alone. Germany has 129; Austria, 54; Great Britain, 69; Italy, 51; Belgium, 28; Spain, 26; Russia, 26; Holland, 16; Switzerland, 10; Norway and Sweden, 9; Denmark, 5; Portugal, 4; Turkey, 2; Greece, 1. In America 183 journals are said to be published, but this must be an underestimate. Asia is supplied with 15, while Oceanica boasts 2, which should have a wide circulation. The entire number of medical journals published the world over is 785, most of which live by preying upon each other directly or by bolting the half-digested items obtained at third-hand from the journal in which they were originally "extracted."—*Philadelphia Medical Times*, Jan. 29.

CHOROIDITIS AS A SEQUEL OF RELAPSING FEVER.

Dr. Julius Trompetter (*British Med. Jour.*, October 30, 1880; from *Klin. Monatsbl. für Augenheilk.*) reports that in three hundred and twenty-five cases of relapsing fever in Breslau, twenty-one cases of choroiditis were observed. They were mostly of the acute form. On admission to hospital, the patients mostly presented the characters of well-marked choroiditis in the form of cyclitis. Very frequently hypopion appeared, in the absence of inflammatory phenomena on the part of the iris. Turbidity of the vitreous humor was ascertained in all the cases, and the visual acuity was always considerably impaired at the commencement of the illness. The field of vision showed a limitation of the periphery in all directions. The course of the choroiditis was in general favorable; its average duration was from a month to six weeks. In two cases both eyes were affected. Dr. Trompetter believes that the affections of the eye in relapsing fever are due to embolism arising from partial necrosis and abscess of the spleen.

Editorial Department.

So much of interest to our readers has transpired within the past few weeks that we devote more than usual space to editorial annotations and such comments as may appear to be appropriate.

First, we call attention to the exercises and address connected with the annual commencement of the Medical Department of the University of Louisiana. These exercises were more than usually interesting and attractive. Degrees of Doctor of Medicine were conferred upon the following students:

Geo. C. Babcock, B. S., University of the South; Robert F. Benson, M. Adolphe Beret, G. A. M. Cooke; Samuel M. Cooper, B. S., C. E., Virginia Military Institute; W. B. Cunnane, O. P. Daly, D. M. Diggs, F. C. Dobins, J. A. Dunn, Geo. T. Elliot, A. B., Yale; E. C. Ellis, W. N. Grace, J. E. Gardiner, W. H. Haynie, B. P., A. J. Himmel, A. B., Cecilian College, Kentucky; George Huhner, James Kilbourne, W. L. Kimbrough, L. H. Lamkin, W. Matthews, David McCaa, W. R. McGuire, T. F. Patton, C. W. Peters, Edgar Poincy, A B., Spring Hill; J. H. Rentz, J. M. Roberts, W. H. Rossendale, A. M., Liverpool, England; C. C. Rutherford, A. F. Sanders, L. A. Scott, Luther Sexton, W. J. Smith, J. T. Sparkman, D. Touchstone, G. B. Underhill, B. S., Trinity College; Max Urwitz, R. W. Walmsley, C. M. Watson, A. B., University of Alabama; G. Wunderlich, A, B., Ph. M.

DEGREES OF MASTER OF PHARMACY.

Gustavus Backes, Adrien F. Beret, Thomas L. Evans, Albert J. Laplace, A. C. De Monsabert, M. Mercier, J. H. C. Rivet, Henry Roeling, Ivan F. Siekman.

Starting out in the performance of our editorial duties with the intention of giving abstracts only, of two addresses delivered on that occasion, they appeared to possess so much that is interesting, and the first one to be so entirely connected and unified, that we have found no opportunity, or place, to mutilate the production by omitting any portion of it.

We, therefore, copy from one of the daily papers (N. O. *Democrat* of March 19th), the following reports of the said addresses:

"At the commencement exercises of the medical department of the University of Louisiana, given on Thursday, there was one of the most brilliant and select audiences that ever graced the Grand Opera House. After the conferring of degrees by the President, Hon. Randall Hunt, the Rev. Dr. B. M. Palmer delivered the following appropriate address:

Mr. President, Mr. Dean, and, members of the Medical Faculty, and gentlemen graduates of the University of Louisiana:

I do not know the principle upon which I have been selected as your orator to-day, unless it be that of Sidney Smith's famous witticism — that the best qualification of a critic is to know nothing about the book he undertakes to review. My acquaintance with the subject of medicine is measured exactly by ten grains of blue mass, administered on two separate occasions, and by which I was salivated both times. With such an experience at the threshold of medical investigation, you can well understand that your noble science has remained to me the forbidden tree of knowledge. The only claim which I can honestly assert is that of being a doctor's model patient, with absolute faith in his professional skill and in the awful potency of his drugs.

But, gentlemen, whilst entrenched behind a paradox which vouches for my competency to address you, I think it safe not to press its authority too far. The ass in the lion's skin makes an imposing appearance until he attempts to roar; when, alas, the raiment is betrayed by the voice. Hoping that you have had a surfeit in the lecture room of learned prelections, bristling with scholastic terms as with barbarian spears, it may be a relief to turn aside from the technicalities of your calling to a more general theme, not wholly foreign, however, to your future life-work. Let me then, invite you to consider *the literary responsibility of professional men as leaders of thought in society.* No injustice is intended in this high assumption to the other guilds, all of which are indispensable to the common welfare. The merchant with his hand upon the commerce of the world; the mechanic, to whose practical skill we owe the useful contrivances of art; the manufacturer, whose looms clothe with their rich and delicate fabrics these fair "lilies of the field" before us to-day; the farmer, who lays in the earth the foundation of all material prosperity— these make their necessary contributions to the complex civilization of the age. Still, through all time, and among all nations, those who deal immediately with the products of the mind are exalted to a pre-eminent responsibility in moulding the character and controlling the destiny of the race.

The lawyer, with his solemn priesthood in the temple of justice; the physician, guarding the citadel of life itself; the preacher, enforcing the law of morals, without which society would be disintegrated; the statesman, whose phrophetic wisdom weaves the history of the future; the phillosopher, who forges in his thought the ideas which rule the world; the scientist, interpreting the hieroglyphics of nature and disclosing her secrets; the artist of every class, whose delicate fancy flushes life with all its beauty; the scholar, who accumulates and then pours forth the treasures of human knowledge -these assert the supremacy of spirit over matter, and by the superiority of their calling must ever be the kings and the masters among men. I must be allowed, however, to qualify this comparison, which to some may appear to be invidious. Intellect must preside over all the departments of labor. In the mercantile class there is an indefinite gradation from the simple tradesman, who measures by the yardstick and the bushel, to the financier, who grasps the principles of political economy, and whose skillful touch is felt among the wires of the most intricate commerce. In the mechanical arts we ascend from the apprentice, plying the tools of his trade, to the original inventor, who constructs the model of every contrivance. In manufacture there is the wide interval between the operative who turns the spindle, and the director who prepares the dye of every color and the shape of every pattern. In agriculture there is at one end the plowman, who drives the furrow in the field, and at the other end the master, who understands the nature of every soil and the method of every culture. In every industry there is a higher plane, upon which mind presides over labor with a dignity quite equal to that found in more purely intellectual pursuits. On the other hand, in what are designated the learned professions, we find the same class of mechanical drudges, who never rise into the higher latitudes of professional knowledge and thought. There is the case-hunting lawyer, in his perpetual search after precedents, and wholly oblivious of any comprehensive principles lying at the foundation of his science. Thereis the routine practitioner in medicine, who goes by the prescriptions of the books, without the guiding maxims which science and induction have long since established. In the pulpit we meet with the iteration of hackneyed common places, with scarcely a glimpse of those eternal principles of government and law upon which the gospel is founded. We readjust, then, the terms of our comparison by the recognition of high intellect in the sphere of the mechanical, and in the admission of much that is executive in the sphere of the intellectual. But when we have made a just equation, it still remains that those whose calling lies exclusively within the empire of mind wield an influence that is paramount, as they are charged with a trust which is supreme. This responsibility I desire to em-

phasize before you, young gentlemen, at the moment of your admission into the vast senate of deliberative thinkers who have shaped the world's history in every age.

1. The first consideration will be drawn from the instrument with which you are call to work, *the mind itself*. It is this which gives man his distinctive rank in the scale of created being on earth. Its superiority is seen in wholly subordinating matter to itself, which lies inert and dead until the spirit in man penetrates its form, discovers and releases its imprisoned forces, and, through the laws under which these operate in the mechanism of nature, subjugates it to its own service and will. Survey the hierarchy of the sciences which are the proud boast of this century, and in them all you find man "the interpreter of nature," by the very force of that interpretation asserting his lordship over matter, which in every province bows to the supremacy of mind. But pass from these high achievements, which signalize its prowess in the conquest of matter, to the grand systems of speculative truth it has constructed from within itself, and your reverence for mind deepens into awe. Look at its philosophies, its science of government and generalizations of political truth, its schemes of education, its general literature, its poetry and song embalming everything beautiful in sentiment and tender in love, and you find a glory upon earth of which the bright shining of the sun is but a faint symbol.

For the discharge of this grand mission the mind is fitted by its very constitution. The first feature which strikes the attention is *the spirit of inquiry* thrusting it out upon external realities. It is a universal characteristic, though exhibited in different degrees and is directed to very different objects. There are those who regard nature with the dull, leaden eye of an ox, and who can see neither beauty in the rainbow nor poetry in the stars:

> "A common mind perceiveth not beyond his eyes and ears;
> The palings of the park of sense enthral this captured roebuck.
> Externals are the world to him, and circumstance his atmosphere."

With others, however, of nobler mould, the horizon which limits their gaze is only that which bounds the universe. Yet, with all this difference in its range, it must be reckoned an inborn instinct, the impulsive spring which drives the mind out upon adventures in a field foreign to itself. The natural curiosity of childhood, stimulated by the presence of mysteries on every hand, ripens at mature age into the spirit of philosophic investigation. The instinct of the swallow does not more surely guide it in its ceaseless migrations, nor that of the bee impel it to gather sweetness from the flowers of spring, than does this all-pervading, unreasoned curiosity in man push him forth to interrogate the oracles of nature. Nor shall its insatiate demand be satisfied until the last secret of earth is yielded up to the torture of scientific research.

Side by side with this instinct of inquiry which impels the mind to action is *the future of intuitive beliefs*, by which alone the mind is able to connect itself with the objects of knowledge. It matters little under what nomenclature they are designated—whether "intuitions," as Locke terms them, or "the principles of common sense," according to Reid, or "instinctive beliefs," with Beattie, or "primary elements of reason," with Stewart, or "categories of the understanding," according to Kant. This catalogue of titles, as shown by Sir William Hamilton, depends upon the different attributes by which these primary beliefs are distinguished from all secondary truths; such as their immediacy, their inexplicability, their originality, their necessity, their universality, their certainty, and the like. But by whatever names indicated, they are primary and authoritative. They are the essential conditions of all knowledge, without which the mind would be incapable of external research, and by which all the notions gained through experience are verified. The two conditions of knowledge are certain objective realities giving us the things to be known, and the mind capable of knowing them—not merely capable of receiving impressions ab-extra, but of judging and being certain of their truth. "We maintain," says Cousin,* "that without universal and necessary principles, empiricism cannot account for the knowledge of the sensible world. Take away the principle of causality, and the human mind is condemned never to go out of itself and its own modifications. All the sensations of hearing, smell, taste, touch, cannot inform you what their cause is, nor whether they have a cause. But give to the human mind the principle of causality—admit that every sensation as well as every phenomenon has a cause, and as we are evidently not the cause, we are naturally led to recognize for these sensations causes different from ourselves—and this is the first notion of an exterior world. Empiricism, he therefore concludes, is convicted of being unable to dispense with universal and necessary principles, and of being unable to explain them."

Then reflect upon the boundless progressiveness of mind, so that neither in time nor eternity shall any arrest be put upon its advance. This is equally true of its separate faculties and of the unit in which they collectively inhere. The memory may be expanded, until it shall embrace the whole encyclopedia of knowledge; the judgment so developed as to resolve with almost infallible precision the tangled web of human perplexities; the reason so strengthened as to move without fatigue through the longest processes of discursive argument; the taste so refined as to seem almost an additional sense to perceive the beautiful and grand; and the imagination shall soar upon its eagle-wing, as though to find no resting place but beyond the

* Lectures on the True, Beautiful and Good," pp. 44-46.

stars in the bosom of the eternal and infinite. In the combined culture of them all, mind glows with an intensity of light, such as that of the whole planetary world if rolled up in a single central orb.

Such, then, is the instrument which the professional man is called supremely to employ. Sublime in the simplicity of its nature, mighty in the triumph of its achievements, with the destiny before it of endless expansion, it lies within each of us an awful trust. With an awakened curiosity it comes forth through the door of the senses and walks up and down the universe, endowed with these primary faiths which are to it the "regulæ philosophandi," and in obedience to which it inquires with confidence and knows with certainty. Upon this is grounded a responsibility not simply common to you with other men from community in its possession, but special as being the instrument of professional toil—a responsibility to use it suitably to the dignity of its nature and the immensity of its powers.

2. The second argument enforcing this responsibility is drawn from *the sanctity of truth.* This lies over against the mind as the object of its search, and, when received, takes the form of knowledge. It is the aliment by which the spiritual part of our being is nourished. What food is to the body—by a mysterious alchemy transmuted into blood, bone, muscle and tissue, and so constantly repairing the waste of corporeal particles—just this truth is to the mind, feeding its powers, which otherwise, through sheer inanition, would sink into blank idiocy. From this relation which it sustains to mind, you may infer the sacredness of truth, the food of angels above, as well as of souls on earth: and mind, in all worlds, throws the halo of its own splendor upon that which nourishes its vigor and expands its growth. But more than this, truth in herself is divine. Well has she been styled "the daughter of the skies," for truth is at last God's thought translated into the forms of human conception. It is God's thought, imbedded in the structure of the globe, written upon the eververlasting rocks, shimmering in the gleam of the sea and in the sheen of the stars. It is God's thought woven into the whole texture of philosophy, science and art, and revealed in all institutions of society, government and law. Lord Bacon has interpreted this sacredness of truth in one of those aphorisms scattered through his writings like ingots of wrought gold: "The inquiry of truth, which is the love-making or wooing of it—the knowledge of truth, which is the presence of it—and the belief of truth, which is the enjoying of it—is the sovereign good of human nature. The first creature of God in the works of the days was the light of sense; the last was the light of reason; and his Sabbath work ever since is the illumination of His Spirit."

How shall I impress you with the conviction that truth is more precious in herself than in the special uses to which men may put her? Consider the repose which she brings to the mind, as contrasted with the anguish of doubt. There is, so to speak, a polarity of the mind, by which it turns freely on its own pivot of inquiry around the whole circle of knowledge, oscillating with every breath of prejudice, and at rest only in the magnetic meridian pointing to truth as its pole. There is, indeed, an honest doubt which, as Sir William Hamilton describes, is but the hunger of the mind with a healthy appetite, seeking after knowledge; but when it settles into chronic and wilful skepticism, it becomes like Milton's gulf,

> "That dark
> Illimitable ocean, without bound,
> Without dimension; where length, breadth and height,
> And time and place are lost; where eldest night
> And chaos, ancestors of nature, hold
> Eternal anarchy."

Who has not felt the pangs of mental travail in bringing his half-formed conceptions to the birth? Who has not turned his face in sadness to the wall, when the questions he may raise are viewed as confessions of his ignorance, and he hears still lingering in the air the echoes of those unanswered questions put by the ancient sages? Who that has tired of the knowledge so purely relative and phenomenal, and pluming his wing to soar upward to the absolute and infinite, has not sunk back entangled in the meshes of his own philosophy and burdened with the speculations which are spun from his own bowels? How blessed then the relief, when truth rises out of the mist in the majesty of her form, and the mind rests calmly upon the certainty of her disclosures! On the other hand, there is a fatal poison in error, when wilfully embraced, to enfeeble the mind and rob it of all productive power. There is a chapter yet to be written in the history of human thought, which, considering the abundant materials for the task, it is strange should still remain a blank. It is to show, by a large induction of facts, that no school ever set itself to the subversion of truth upon which the doom of intellectual imbecility was not finally visited—in each generation sliding down the scale, until the power of self-propagation is wholly lost and it dies of sheer exhaustion.

What, then, are the obligations imposed upon the followers of truth? Evidently, to collect the facts through the whole of her broad domain, as the crude ore in which the precious gold lies hidden; then to collate and classify the same, not by outward resemblances, but by the real affinities which a careful comparison shall disclose; then to eliminate the principles which are to the external fact what the soul is to the body, and which determine the fact to be what it is; and finally to hold in reverence and love the whole system of truth which is

thus built up. There is a mental instinct which leads us to search for the simple in the midst of the complex, for unity in the midst of diversity. Sometimes in our impatience to effect this reduction, we are betrayed into temporary errors. The love of simplicity will sometimes seduce even the cautious from the path of research; and crude theories will be adopted because they appear to resolve the many into one, and to yield the central principle which is thought to lie at the heart of nature. Still, we feel that we have not reached what deserves to be called truth in any strict sense until we have torn off the outside shell of fact and got down to the organizing principle which is its core. And in proportion as we approximate this result we are filled with joy in the analysis; as, for example, when a few elements, not yet reduced to their smallest number, combine to give us this concrete world. As the few letters of the alphabet compose a language freighted with the wealth of human th ught, or as the few digits of the hand yield all the numbers of arithmetic, so these few elements give us the universe of matter. The same factors which compose the black ore smelting in the miner's furnance are found in the petals of the rose, or in the beads of crystal dew glistening like pearls upon the leaves of summer. The hard granite at the earth's foundation yields the same elements with the snow flakes which wreath the ragged boulder on the mountain side. Were it my office to do so, I would, with greater than masonic solemnity, swear each one of you into your profession at this high altar of truth—to be loyal through life to her queenly sceptre, swayed over the whole empire of matter and of mind.

3. It is time, however, to enforce this responsibility by the consideration of your *personal relation to society as its recognized leaders in the discovery and exposition of truth.* Human life is so short and its occupations so diversified as to compel a division of labor, which breaks society into several guilds. In this division the function is assigned the learned professions of dealing with abstract and general principles. It is their province to substantiate and formulate these, which then pass down to be applied by those who undertake to manage the more practical side of life. If it be a position of pre-eminence they are exalted to it by the general suffrage of mankind, constituting a trust to which a responsibility attaches as large as the honor it confers. Two classes may be distinguished, each indispensable to the other and both united in the joint result of their toil. In the first are found the original thinkers, who, like the Moses of the Old Testament, strike the stubborn rock from which the imprisoned waters of knowledge shall flow. In the second are found the interpreters, who translate these great thoughts into the popular dialect and diffuse the stream of knowledge. They serve as reporters to the first, catching the thoughts which might perish in the closet, and like answering cliffs swell the echo until the reverberation fills the world.

Let us see whether this distinction between, the theoretical and the practical extends so far as to the assignment of different functions to each. What would become of the mechanical arts as they are now developed, without the command over the powers of nature which science affords? Where would the manufacturing interests be, without the antecedent knowledge coming from the laboratory of the chemist? Could we have the railroads and telegraph wires which cover the earth as with a net-work, if the powers of electricity and steam were not evoked, and if engineering science had not constructed the machinery for their use? Lieut. Maury sits in his observatory at Washington and tabulates the reports brought from all portions of the globe, and then maps out the currents in the sea which become the highways of traffic across the main. The political economist formulates the principles which govern the production, accumulation, distribution and consumption of wealth, and thus gives to the merchant the laws of barter and exchange, by which all internal and external commerce is regulated. The financier who is skilled in the management and application of money, enunciates the principles upon which our banking operations are based. The jurist digs down into those eternal verities of justice and law, which underlie every system of legislation and jurisprudence that civilized nations enjoy. The philosopher, who, amidst the haze of metaphysical speculation, interprets the universal laws of mind, finds his abstract researches entering at length into great systems of education, remodelling political institutions, and effecting organic changes in the structure of society at large. This distribution of functions must exist, whether men desire it or not. Nature does not so easily confess her mysteries, but that the hierophant must sit patiently before the oracle, which responds at last only to a resistless interrogation. Leisure must be had to solve the enigma in which the secret is first betrayed. Severe experiment must verify the interpretation before it is announced, and long must be the silence in which thought elaborates the form in which it shall be given to the world as a productive truth. When a falling apple suggested to Sir Isaac Newton the idea of extending the law of gravitation to the planetary world, he needed time to prove that this force, with its known law of decrease in proportion to distance, was sufficient to retain the moon in its orbit, and to explain its rate of motion around the earth—a calculation which, as it drew near the desired result, so filled him with emotion that he was obliged to invoke the assistance of a friend to finish the demonstration which established his theory and immortalized his name. If the science of our day walks upon the two equal legs of discovery and application, each must bear its equal proportion of the common weight. Both are useful in their correlation, and the body can dispense with neither. Those who are immersed in the practical details of life have enough to do in realizing the concrete; and they cordially re-

mand the abstract to the care of others, who are led by inclination or by the convergence of circumstances, to tread the higher walk of original investigation. But society, in its very dependence, must hold to a strict account those who dig the channels in which the thought of the world shall flow. It is a crime nothing short of treason if these streams, instead of clothing life with grateful verdure, shall send forth a pestilential vapor, blighting it with barrenness and death.

Gentlemen, I must not abuse the privilege of this hour to weariness. Suffer me to narrow this discourse to the practical question, how shall this professional responsibility be met and discharged? To this a threefold answer must for the present suffice.

It is indispensable, first, that *we cherish a high ideal of the calling in which we are engaged.* No man is fit for any professional pursuit who is not steeped in its spirit, and we discharge our duty best to the world by achieving excellence in this. The ability or the opportunity may be wanting to enrich it with new discoveries; but even the neophyte may ascend to an elevation from which to view the entire landscape of its literature. It is for this purpose these schools of professional training are founded, not simply to ground the student in the elements of knowledge, but to afford a conspectus of all the related parts of a system which is encyclopedic in its range. The vision may, for a moment, bewilder with its vastness; but it will settle in the memory with a distinctness of outline, and with a harmony of proportion, as shall make it "a thing of beauty and of joy forever." Broader and deeper let the foundations of knowledge be laid in these classic halls, within which burns the perpetual fire upon the altar of truth. Here let generous youth first glow with the inspiration of their calling, and go forthinto life wearing upon the front the badge of a hearty consecration to its service.

You will observe that each profession is stamped with its own particular seal. In the law, the signature is a robust love of justice; starting with the fundamental dictates of conscience, it proclaims the doctrine of human rights; and its characteristic is an inflexible virtue, tempering its decisions with equity whenever the hard generalities of law would operate injury and wrong. In divinity, the signature is fidelity to the record in which a supernatural testimony is given, and an unswerving faith scaling the heighths of those spiritual truths which ascend until they touch the throne of the Eternal. In medicine, the signature is found in the spirit of benevolence of which it is begotten, and in the patient induction upon which all its discoveries are founded. Thoroughly experimental in its character, its researches are always cautious, and its conclusions largely tentative. No profession demands such minuteness of observation and such balance of judgment. It goes everywhere in nature,

"To learn upon a hint, to find upon a clue,"

and is, therefore, in the form of its investigations completely scientific, as this term is technically understood. Its genius is the spirit of the inductive philosophy, and its ideal is reached only by those who are imbued with the same. Upon the ethical side of your profession I will say nothing, lest, being so germain to my own, I should drop unawares into a sermon. There is, however, one fact singularly pertinent to this discussion—that the darkest problems of medical science lie in the plane of intersection between matter and mind. This, I take it, affords a sure defense against the charge of materialism, or of a materialistic tendency, which has been thrown as a reproach against medical studies. In the sweep of your induction you are simply compelled to take in the facts of mind as well as those of body, and your generalization is incomplete so far as either is disregarded. In compassing the idea of your calling, you are lifted into the highest walks of philosophy, as before you traversed all the paths of science—and in the union of the two the true conception of your profession is realized and its brilliant honor is disclosed.

Again, the high requirements of professional responsibility cannot be met without *a broad culture beyond the limits of one's immediate vocation.* In the material arts the division of labor may be carried so far as to require eighteen men to make a pin. Even here it is not without a serious depreciation of the operative, for can you conceive of a being more hopelessly dependent than the man who knows nothing else than to make the eighteenth part of a pin? But in the intellectual sphere such minute sub-division as shall bring into play only one class of faculties, breeds those melancholy monoptotes which are declinable only in a single case. The mind, though a unit, is manifold in its operations, and its different faculties brace each other in their symmetrical development, all becoming stronger through mutual support. The reasoning power feels the reflex influence of the imagination, while this in turn rises to a higher flight when bridled by the judgment. How much of the insane extravagence and mysticism of German metaphysics may be due to that extreme subdivision of labor which leads a bookworm to spend a lifetime in the elucidation of a single word, would perhaps be a curious study. But there is a manifest loss of intellectual power, when one-half of the mental faculties are never brought into action. We meet constantly with minds singularly subtle and acute, but absolutely destitute of breadth. The absurdities into which they fall are among "the curiosities of literature." It is always with them the leg of a fly in the lens of a microscope as big as a house beam. These aberrations are best corrected by widening the range of vision; by excursions into other fields of thought; by the exercise of all the faculties alike; by the habit of viewing the broad landscape of human knowledge. Beside the enlargement of the mind itself, and making it truer to the technical studies of a particular department, this generous culture begets a proper

sympathy with other pursuits. It enables us to mingle more freely in life's general current and to take our share in the world's common progress.

But this brings me to the third and last suggestion as to the way in which this professional responsibility can best be discharged, viz.: through *a cordial alliance of all engaged in the discovery and propagation of truth.* I refer, of course, to no external league with its written articles of agreement, but to that secret sympathy existing between those who are laboring for a common end. Truth in itself is one and indivisible; but to finite minds, compelled to compass it by successive steps, this unity does not immediately appear. The lines of investigation indeed lie often far apart, and different fields are fenced off as though they had no connection one with another. Nay, border feuds spring up along the separating line, and a partisan warfare is handed down from generation to generation between those bound by the greatness of their trust to keep the peace. Philosophy, science and theology have, it is true, their several jurisdictions; but their edges touch each other at so many points as to evince that they are provinces of a single empire. Every discovery of science is but the prelude to another that is higher; and when she has reached her last generalization, she must kneel upon that summit and wait for the revelation that shall come from above as the completion of her knowledge. So far from any real antagonism between the two, science is, from first to last, but the prophecy of a revelation, the discoveries of the one and the testimonies of the other blending in the glory of the truth. The noblest fellowship on earth, next to that of the Church of God, should be found in the great brotherhood of scholars, separated by no distance of time or space, bound together by no secret signs, but by love of truth; a noble army of confessors proclaiming with united voice that the pleasures of knowledge are only less than those of virtue and religion. Yet, alas! what schisms have divided the followers of that truth which is by acknowledgment "homogeneal and proportional." The mathematician, priding himself upon the accuracy of his rigid science, smiles in disdain upon the probabilities of the moralist and the speculations of the metaphysician; who reciprocate the scorn by contrasting the variety and acuteness of their discriminations with the tread-mill monotony of the other—while the professor of the humanities boasts against the ruggedness of both the elegance and polish of his peculiar studies—and all forget that together they but unite to give the full equipage of the scholar. What babblings and contentions between those who measure only the arc of their own little segment in the great circle of truth! Who can forbear reciting to these disputants that exquisite passage of Milton in his plea for the liberty of unlicensed printing—a passage as touching in its pathos as commanding in its eloquence—"Truth came once into the world with her Divine Master, and was a perfect shape most glorious to look upon.

But when He ascended and His apostles after Him were laid asleep, there straight arose a wicked race of deceivers, who, as the story goes, of the Egyptian Typhon with his conspirators, how they dealt with the good Osiris, took the virgin Truth, hewed her lovely form in a thousand pieces and scattered them to the four winds. From that time ever since the sad friends of Truth, such as durst appear, imitating that careful search that Isis made for the mangled body of Osiris, went up and down gathering limb by limb still as they could find them. We have not yet found them all, lords and commons, nor ever shall do till her Master's second coming. He shall bring together every joint and member, and shall mould them into an immortal feature of loveliness and perfection." And we say of such as will not recognize the unity of truth, as Milton said of licensing prohibitions, that they must not "stand at every place of opportunity forbidding and disturbing those that continue seeking, that continue to do our obsequies to the torn body of our martyred saint. * * * They are the troublers, they are the dividers of unity, who neglect and permit not others to unite those dissevered pieces which are yet wanting to the body of Truth."

Gentlemen graduates of the Medical School, I cannot commend you to your future life-work in more beautiful words than those of Tupper:

Few and precious are the words which the lips of wisdom utter;
They be drops of the crystal dew which the wings of seraphs scatter,
When on some brighter Sabbath their plumes quiver most with delight:
Such, and so precious, are the words which the lips of wisdom utter.

As the fumes of hallowed incense that veil the throne of the Most High;
As the beaded bubbles that sparkle on the rim of the cup of immortality;
As wreaths of the rainbow spray from the pure cataracts of truth;
Such, and so precious, are the words which the lips of wisdom utter.

They be grains of the diamond sand, the radiant floor of Heaven,
Rising in sunny dust behind the chariot of God;
They be flashes of the day-spring from on high, shed from the windows of the skies;
They be streams of living waters, fresh from the fountain of intelligence;
Such, and so precious, are the words which the lips of wisdom utter.

Wherefore, friend and scholar, hear the words of wisdom;
Whether she speaketh to thy soul in the full chords of revelation,
In the teaching earth or air or sea, in the still melodies of thought,
Or haply in the humbler strains that would detain thee here.

When the doctor had concluded the band played a choice selection, and then Dr. T. G. Richardson introduced Dr. L. Sexton, who delivered

THE VALEDICTORY

for the class.

Worthy Professors, Fellow Students, Ladies and Gentlemen:

Time in his onward flight has registered the close of another session. Beauty and intelligence have gathered to do us honor at the close of our humble but honest effort. Our hearts

beat high with hope at the favorable auspices which usher us into our professional life. Still we cannot leave the arena of our struggle without regret. The loveliness which surrounds and lights this gorgeous scene; the beautiful and accomplished ladies who have come to welcome us into our chosen profession; the bright eyes reflecting every grace of heart and soul, will fill our thoughts as we journey home and dispel the clouds faintheartedness may invoke. Fellow-students, we have today knocked at the portals of medical science, and its gates have been opened unto us; but before we cross the threshold of a new life, let us consider its true object and the responsibilities it imposes. We should ever remember "that the way to be happy ourselves is to make others happy." "There is a gentle element, and man may breathe it with a calm, unruffled soul, and drink its living waters till his heart is pure, and this is human happiness." And can this be attained in the pursuits of vain ambition, whose hallucinations are so inviting to the young? Look, for instance, at the character of Napoleon. He, in the language of the eloquent Prentiss, was the child of destiny, the thunderbolt of war, the victor of a hundred battles, the dispensor of thrones and dominions, whose word was fate and whose wish was law. But later observe him, vanquished and flying from the field of Waterloo—the wild beast ravaging all Europe in his wrath, hunted down by the banded and affrighted nations and caged far away upon an ocean-girded rock. Is happiness to be found in storing up the sordid dust? Ask at the door of the miser's hovel and read in his haggard visage the forlorn response. And thus we might review the different avocations and passions of men, and we would invariable arrive at the conclusion,

> "That if happiness is truly understood,
> It consists alone in doing good."

"The friend in need is the friend indeed," says an old proverb, and, if it be true, the pathway of the physician is a royal and felicitous one.

It is our mission to minister to royalty on his palatial bed and to poverty on his humblest couch, and let us in either case discharge our duty with strict fidelity to the cause we espouse, remembering that our remuneration cannot always be summed up in dollars and cents, but in a conscience that bespeaks of a duty done.

If we had only to meet disease in fair and open fields our task in most cases would be comparatively easy, but we must be prepared for the worst. Like some gallant warrior in a dangerous siege, we should keep our armor bright to meet this enemy, disease, as he lurks in ambush in his most hideous and revolting forms. At your hands, fellow-students, the community will require a strict account of that health of which you have been appointed guardian; and at the mournful intelli-

gence of death you cannot respond as did the first fraticide, "Who made me my brother's keeper?" The broad and general principles of medicine resembles the base of some huge mountain; they are vast and limitless; they are, nevertheless, the corner-stones of our profession, and the application of these principles is the rock upon which our success depends.

To grasp these principles we have had many a hard struggle and fierce battle; but by an unflinching and untiring energy on the part of our professors, and an assiduous devotion to duty on our part, we have to-day reached the goal for which we have been so long striving. We stand to-day with diplomas in our hands, and many of us with scarcely a penny in our pockets; but let us not be discouraged, brave comrades. The history of all professions abounds in examples of those, who rising from the most meagre circumstances of poverty's merciless grasp, stands pre-eminently forward to-day challenging the respect and admiration of the scientific world. These, fellow-students, are results of an unyielding purpose and unbending will, and are meet examples for our emulation.

To approximate the degree of perfection and to drink deep of the Pierian spring of Esculapius will cost sacrifices of personal preferences in many instances; but, in the language of the poet, I urge you, "press on:"

> What is its earthly victory? Press on!
> For it hath tempted angels, yet, press on!
> For it shall make you mighty among men;
> And from the eye of your eage thought
> Ye shall look down upon monarchs. Oh, press on!
> For the high ones and powerful shall come
> To do you reverence; and the beautiful
> Will know the purer language of your brow
> And read it like a talisman of love!
> Press on! for it is God-like to unloose
> The spirit and forget yourself in thought,
> Bending a pinion for the deeper sky,
> And in the very betters of your flesh
> Mating with the pure essence of heaven!

Press on! for in the grave there is no work and no device. Press on! while yet ye may. In glancing to the future of medicine, fellow-students, and deliberately reflecting on the advancement of medical science, and beholding the broad fields of experimental research, we are reminded of the necessity of pressing on. We can also console ourselves that our lives need not be confined to empiricism and palliation of disease, but that something more substantial may be reached by prevention and prophylactic measures so elaborately taught and lucidly explained by our professors, and if in a single instance we are conscious of having averted some loathsome disease by preventive means, thereby saving a human life, it will be an imperishable gem in our crowns, far brighter than those which deck the richest potentate s brow.

Gentlemen, we espouse a noble cause. We are initiated in a most honorable profession: In the Homeric poems the knowledge of medicine was considered a "sacred secret," transmitted from father to son in the family of the Asclipiadæ, and from that day to this it has remained, not a "sacred secret" but a "holy trust." It is a matter for which the profession may justly feel proud that in every emergency there have been men of the profession who, when "weighed in the balance, were not found wanting."

No, as late as 1878, when that dread pestilence "that walketh in darkness and wasteth at noonday, whose muffled footsteps give no warning of approach, and whose mysterious pathway is only traceable by the desolation it has wrought," swept like some dread simoon over our beautiful Southland, and brooded like a nightmare over this lonely city. Knights of the profession stood like faithful sentinels on the outposts of duty, with a firmness and devotion unequaled in the annals of history. Some laid down their lives as the cost, in the presence of the dread demands from "courts of death;" others more fortunate were restored again to home and friends, full of honor, without a single blotch upon their bright escutcheons, and their praises have been sung by the million voices of every smitten bower and glen, and from every sun-kissed floral vale.

> He who can buckle on the sword
> To meet the foeman of his land and race
> Content, if but their health shall be restored,
> To end life's journey on the battle place,
> Is worthy of as bright a crown
> As history can jewel for his pallid brow,
> Is worthy of all honor and renown,
> The world concedes and we concede it now.

Fellow-students, parting is always sad, and especially is it so on this occasion. We say farewell, and with some of us it may be farewell forever—to our dear old college, to our beloved professors and to each other; and this parting is made the sadder when we reflect upon the hallowed associations of our college life. Our connection has been one of confidence unlimited and pleasure unalloyed. The ties of brotherhood were never more strongly woven than those binding us together; no ill-feeling has marred our association, nor has envious rivalry estranged our affection. When in after years we take a retrospective glance at the changes time hath wrought in his cycles round, we will revert to these associations as an oasis in the desert of life and as a verdant spot on memory's hallowed page. And fellow-students, believe me, your success will be my greatest joy; your failures, if any, my saddest grief. Wherever you may roam and to whatever distinction you may attain, my tongue shall ever speak your praise, and in this breast your success will ever strike a chord in unison, and from it shall echo the intonations of a brother.

To you, worthy professors, who have ascended the eternal hill of science, till its very summit you have reached, we owe a debt of gratitude which we can never pay; but, rest assured, your labor shall not be in vain. Your fondest hopes and brightest anticipations will be realized when, in future years, you observe the twigs that you cast forth to-day developing into the sturdy oak, beneath whose umbrage afflicted and suffering humanity shall ever find refuge.

In justice to Dr. Sexton, it should be mentioned that he received the prize awarded by the Board of Administrators of "The Charity Hospital" for having stood at the head of the list in the competitive examinations for positions of internes in that institution. The prize is a heavy gold medal, inscribed on the obverse: "competitive prize awarded to Luther Sexton, by the Board of Administrators of the Charity Hospital. The reverse is inscribed with an excellent etching of the Charity Hospital, and the words "New Orleans, 1881."

The Medical and Surgical Association of New Orleans, at its meeting held on the 22d January, appointed a committee to report upon a classification of goods and articles of commerce for sanitary ends. This effort is not new to preventive medicine, but it is nevertheless the first time it has been attempted to be executed in this country. We are sure the axiom may be affirmed that the special infections of our principal epidemic diseases possess such a degree of uniformity in their manner of impregnating fomites that those articles which are the best carriers of any one among them are likely to be equally dangerous for harboring and communicating any other. It will, therefore, occur that some schedule like that approved of by the Medical and Surgical Association, will be as useful against the spread of the eruptive fevers as against yellow fever. It ought to be mentioned that the Medical and Surgical Association simply permit this classification to go out over the signatures of a committee, whose report they have unanimously approved, not as final or absolutely correct, but only as a first essay in the direction of accomplishing a good object, and leaving it subject to future correction by others, or themselves. It must also be stated that the positive expression in the note heading the third-class, is the result of mere inadvertence, and must not be understood as a dogmatic declaration on the part of the Association.

Report of Committee upon classification of Goods and Articles of Commerce for Sanitary Ends:

NEW ORLEANS, LA., MARCH 7th, 1881.

WHEREAS, at a meeting of the Medical and Sanitary Associations of New Orleans, held on 22d January, 1881, a resolution was adopted directing a committee be appointed to classify such commerce as can be moved to andfrom any point where epidemics or contagious diseases may prevail.

The undersigned in accordance with the said resolution after careful consideration, herewith recommend the following three classes:

FIRST CLASS—A list of articles the shipment of which shall be absolutely prohibited from any place where contagious diseases previals:

Apples dried.

Bagging, bags, bale rope, baling twine, batting, bonnets, burlaps.

Cabbage, caps, carpeting, carpet lining, chain, cotton, woolen and hempen, clothing, cocoa matting, cocoa nuts in husk, cotton, cotton waste, cotton yarn, in bundles or bales, cotton waste, moats and picking, currants dried.

Domestics, sheeting, shirting, ticking and denims.

Excelsior.

Feathers, felting, flax baled, flour in bags, fruit dried, furniture upholstered, fodder and husks.

Game dressed, window glass packed, grass and hemp mats, gunny bags in bales.

Hair in sacks or pressed, hats, hay pressed, hemp in bales, dry hides loose, dry hides in bales compressed, hides green, hobby horses packed, horns, hoofs, household goods.

Jute.

Krout.

Leather.

First-class passenger cars.

Manure, marl and earth, matting cocoa hemp or straw, mats and rugs, mattrasses, merchandise, millinery, moss.

Nails in bags, nuts, edible in sacks, nuts in sacks.

Oakum, oil cakes, osnaburgs,

Paper stock, pepper and spices in bags, poultry dressed.

Rags in sacks or bales, ramie plant and roots sacked, packed or baled, roofing bales or rolls.

Saddlery, saddles, skins, all kinds, soap stock, sour krout, straw goods.

Umbrellas, boxed.

Vehicles, upholstered.

Wadding, wagons children's upholstered, wagon covers, wicking, wool, woolen goods.

Yarn cotton, yarn woolen.

SECOND CLASS—A list of articles which may or may not be prohibited by quarantine regulations, leaving the discretion to quarantine authorities:

Ale and porter in glass, packed, axle grease.

Baking Powders, bananas, barley, beans, bellows, berries, billiard tables, bird cages boxed, bitters and cordials in glass, boiler felting, books, boots and shoes, boxes, empty, bran, brooms, broom corn, brushes.

Canned goods, canvas, cards, car grease, case goods in glass packed, chalk, champagne in baskets, charcoal, cheese, china ware, chocolate, churns, cider in glass packed, clocks, clover and grass seed, clothes pins, coal, coal oils in cans packed, cocoa nuts husked, cocoa, coke, coffee ground, coffee green, collars horse, composition for roofing, confectionery, cordage, cork, corn, cotton seed, crackers, cranberries, crockery, cutlery.

Dates, desiccated meats and vegetables, drugs and medicines, dry goods, duck, dye woods in bags or barrels.

Earthen and stone ware, eggs.

Fertilizer, figs in drums, figs in casks or boxes, fire crackers, fire works, fish dried in boxes, flour in barrels, fruit canned, fowls in crates or coops.

Game, live, garden seeds, ginger, ginseng, glue, grain, grease, gums.

Herring in boxes, hops, hominy, honey.

Ice Chests, India rubber goods, indigo, ink in bottles packed, iron mantles boxed, crate baskets, fronts, frames and fenders.

Japanned Ware.

Lanterns, lemons, liquors or liquids in glass, packed, liquorice, live stock, liquids in cans packed, looking glasses.

Madder, malt, matches, meal in barrels, meats, fresh, medicines, mill stuffs, mineral water in glass, moldings, musical instruments.

Nuts in casks or barrels.

Oil in glass or cans packed, oil cloth, oranges.

Plants in boxs or cans, paintings and pictures framed, boxed, paper in boxes, paper hangings, paper, printing and wrapping, paper bags, pasteboard, peaches, dried, pears, pepper and spices in boxes, piano-fortes, pickles in glass, pineapples and bananas, pipes, clay, plaster of paris ornaments, plate and looking glasses, porcelain ware, potatoes, poultry in boxes, preserve and meats in cans, printed matter in sheets, boxed, prunes in casks.

Raisins, strapped, refrigerators, retorts, clay, rice, rope, rubber belting, packing and hose.

Saddle trees not boxed, saleratus, salt, salts epsom, saltpetre, sandpaper, seeds, shorts, shoe pegs in bags, shoe findings, shot in bags, shrubbery, soda, split peas, spices, starch, stationery, stone ware, strawberries boxed, sugar in bags, sumac.

Tallow, tanbark, tarpaulins, tea, terra cotta packed, terra japonica, tents and fixtures, tobacco leaf in hogsheads, tobacco cut in barrels, boxes or bales, tobacco manufactured in boxes or kegs, toys, boxed, traveling bags, trees, trunks empty, turnips, twine, turpentine, turpentine in cans, packed.

Vegetables, packed.

Whips, whiting, whisky in boxes, wine in baskets, wrapping paper.

Zinc Paint, in cans or kegs boxed.

THIRD CLASS—A list of articles which should be free from quarantine restrictions, as they cannot by any possibility be the means of conveying disease.

Agricultural implements, alcohol, ale and beer in wood, alum, anvils, axes, ax handles, axles car, axles carriage and wagon.

Bacon packed or loose, bark and cob mills, bath brick, bed springs, bed cords, bee hives, beef and pork in barrels, beeswax, bells, belting, binder's boards, blacking in barrels or boxes, black lead in barrels, bleaching salts, blinds, blue vitriol, boilers, boiler flues, borax, bottles empty, boxes as skeletons, brass castings, sheet bolts and wire, brass vessels, bread, brick, brimstone, broom handles, buckets, buggy bodies, burning fluid, burr blocks, butter.

Camphene, candles, cans empty, carriage springs and boxes, car wheels and axles, carboys empty, case goods in tin, cement and plaster, chains loose, chains in casks, chain pumps wood, chain pumps cast iron, chair stuff in rough, cider in barrels, cider mills and presses, circular saw frames and saws, circular saw mills, cisterns, clock weights coal oil or its products, coffee mills, coffins metalic or wood, concentrated lye, condensed milk, coffee and meats, cooperage, copper bottoms, cooper plates, sheet bolts, pigs, rods, copper vessels, copper and brass vessels in barrels and casks, copper stills, copperas, copying pressess, cotton cards, cotton ties, cream tartar, cutting boxes.

Demijohns, doors window frames, sash, drag saws with horse power, drain tile, drums, dye wood in sticks.

Earthenware loose, edge tools, epsom salts, extract of logwood.

Fence posts, fire brick, fire arms, fire tile, fish pickled and salted, fish fresh, fruit green not otherwise specified, furniture not upholstered.

Gas fixtures, gas pipe wrought, gravel, grind stones, gunpowder, guns, rifles and other firearms boxed.

Hames, handles and helves, hardware, hay knives, head lights, herring in kegs, high wines, hinges, hoop poles, horse shoes and nails, horse-powers, hollow-ware, hooks.

Ice cream freezers, ice, ink in wood, insulators, iron bar, boiler, jail plate band, iron bolts, washes, nuts and rivets in

boxes or kegs, iron pig, iron scrap, iron castings, iron hoop, sheet and galvanized, iron mantles, crates, iron railing, iron roofing, iron safes, iron pipe, gas and water.

Jack screws, joiners' work.

Ladders, lampblack in casks or barrels, lard, kegs, barrels or tierces, lard in buckets, boxes or cans, lasts, laths, lead pipe, bar or sheet, lead in cask or pigs, lightning rods in bundles, lime, liquors or liquids in wood, lithographic stones, locomotive tire, locomotives and cars, locomotives and tenders, freight or baggage cars, flat cars, lumber.

Machinery, marble, marbles, material for fruit boxes, measures, mill stones, mineral water in barrels, molasses, mouse traps.

Nails and spikes in kegs or boxes.

Oils, lard, linseed, cotton seed or castor in wood, ordnance stores, ox yokes, oysters.

Paints in barrels or sacks, picture frames, pickles in cans, barrels or casks, pitch, plaster of paris, plaster, plumber's materials in boxes or casks, portable engines, potash, powder, printing presses, pumice stones in casks, pumps, pump tubing, putty in barrels, casks, boxes or kegs.

Rat traps, railroad chairs, iron and spikes, red lead, roofing, slate, rosin, rubber car springs.

Sad irons, saddlery, hardware, safes, milk, meat and bread, sand, sardines, sash weights, saws on boards, saws, drag, with horse power, saws, circular, with frame, saw mills, portable, scales and scale beams, scythe stones, sewing machines, signs, sieves, shingles, shingle machines, shells, shoe pegs in barrels or boxes, shoe blacking in barrels or boxes, shot in kegs or boxes, show cases, shutters, wooden, slabs, slates, snuff, soda water in fountains, soda fountians, soda, ash and sal soda, staves and headings, spelter, stationery steam boilers, steel, steel springs, cast, steel plow wings, stone, stoves and hollow ware, stove furniture, stove blacking, stove pipe, sugar, except in bags, sugar cane.

Tacks, tar, telegraph wire, tile (drain), tile (patent), tin plate and block, tin ware boxed, tin foil in boxes, tools (mechanics', boxed), trucks, tubs, type, turpentine in wood.

Varnish, vehicles not upholstered, veneering, vinegar, vises (iron), volute car springs in boxes.

Wagons, children's, not upholstered; wagon felloes, bows, wheels, shafts, spokes and hubs; wagon axles, iron; washing machines, water pipe, water coolers, wax, whalebone, whisky in wood, white lead and zinc paints, willow ware, window frames, wire rope, wire screens, wire, wire fencing, wire cloth, wood, wood screws in casks or boxes, wood in shape (boxed), wooden ware.

Zinc.

Articles now classed in third class when packed in wool, cotton, straw, saw dust, etc., will be placed in first or second class according to the charaeter of the material used in packing.

D. C. Holliday, M. D.
L. F. Salomon, M. D.
S. M. Bemiss, M. D. } Committee.
C. J. Bickham, M. D.
Geo. K. Pratt, M. D.

But the New Orleans Medical and Surgical Association is a bee hive without drones. All the inmates are workers, either by choice or by compulsion. It has originated a projet for the advancement of preventive medicine which we believe to be a most timely and long needed measure. All well instructed sanitarians understand the difficulties in the way of a proper application of the rules of preventive medicine occasioned by opposite or uncertain diagnoses of yellow fever. For the purpose of illustrating in the most forcible manner the condition of things resulting from disputes respecting diagnosis, let us picture two extremes which may be imagined to exist, if they do not in reality exist. One party to the dispute, from one or another motive, determines against reporting a case of yellow fever, and stubbornly insists that no case shall be classed as yellow fever which cannot answer to the roll call of every symptom hitherto charged up to that disease. The other party is by character an alarmist, or from some motive wishes to prove the existence of yellow fever upon the slightest evidence. He, therefore, is disposed to diagnose the disease as yellow fever upon some individual symptom usually found in that malady. Now, the Medical and Surgical Association has attempted to remove these great impediments to practical sanitary work by proposing a conventional agreement as to those symptoms which shall, for sanitary purposes, be looked upon as indicating yellow fever. The Association does not ask either the scientific world, or individual sanitary organizations to adopt these criteria as fixed or complete. It does not even bind itself, or its own members to a tacit obedience to them. It merely puts them forth as the best beginning it is able to make in the way of meeting an existing demand for improvement.

The following schedule of symptoms was under the above named conditions, unanimously adopted by the Medical and Surgical Association:

6th. For sanitary purposes the following groups of symptoms shall be considered to indicate yellow fever:

Group 1st.—A person after (a) a sudden attack has (b) a fever of one paroxysm, attended with (c) marked congestion or blood stasis of capillaries of surface, conjunctivæ and gums; with (d) a history of probable exposure to infection, and (e) no history of a previous attack of yellow fever.

Group 2d.—A person after (a) a sudden attack has (b) a fever of one paroxysm, followed by (c) unusual prostration, (d) albuminous urine, (e) yellowness of conjunctivæ, or skin, and having no positively authenticated history of previous attack of yellow fever.

Group 3rd.—A person has (a) fever of one paroxysm, (b) albuminous urine, (c) black vomit, or (d) suppression of urine, (e) general hemmorhage tendency under (f) circumstances where exposure to infection is a possibility.

II. Suspicious cases of yellow fever for sanitary purposes.

The following symptoms associated with a fever of one paroxysm in a patient who has apparently been exposed to infection and has never had yellow fever shall be held to justify in either of the six following cases a suspicion of this disease, viz:

First, suddeness of attack either with violent pain in the head and back, injected eyes, and face or with marked congestion of the superficial capillaries.

Second, Want of that correlation between pulse and temperature usual to other forms of fever.

Third, Albuminous urine.

Fourth, black vomit.

Fifth, general hemorrhagic tendency.

Sixth, yellowness of skin.

The following cases shall also be deemed suspicious:

Seventh.—Any case respecting which reputable and experienced physicians disagree, as to whether the disease is or is not yellow fever.

Eighth—Any case, respecting which efforts are made to conceal its existence, full history and true nature—in violation of Sec. 27, City Ordinance, June 24, 1879.

In the event of the death of a suspicious case a post mortem examination should be made when practicable. Both before and after death, yellow fever is specially and pre-eminently characterized by the fact that it is *par excellence*, a hemorrhagic fever, marked by capillary congestion and its sequelae; hence, post mortem evidences of a general hemorrhagic tendency in internal organs, especially in the digestive in preference to the urinary tract, shall be held to confirm the suspicion.

Next we call attention to the following:

PROCEEDINGS OF THE ORLEANS PARISH MEDICAL SOCIETY.

ANNUAL MEETING.

NEW ORLEANS, March 28, 1881.

The Society was called to order at 8 o'clock, P. M., Dr. S. S. Herrick, President, in the chair, and a quorum present.

The minutes of the last regular meeting were read and approved.

The reports of the Secretary and Treasurer, and of the President were read and accepted.

Dr. J. P. Davidson was unanimously elected President of the Society for the ensuing year.

The following gentlemen were unanimously chosen Vice-Presidents of the Society: Dr. C. J. Bickham, for 4th, 6th and 7th Districts, 1st Vice-President; Dr. J. S. Copes, for 1st and 5th Districts, 2d Vice-President; Dr. Charles Turpin, for 2d and 3d Districts, 3d Vice-President.

Dr. P. B. McCutchon was elected Recording Secretary, and Dr. Herrick, Corresponding Secretary.

On motion, duly seconded, of Dr. W. H. Carson, the thanks of the Society were tendered the retiring President, Dr. S. S. Herrick, and the retiring Recording Secretary, Dr. F. Parham, for their efficient services during the past year.

Dr. F. W. Parham, the annual orator, delivered the annual address as follows:

ADDRESS DELIVERED AT THE ANNUAL MEETING OF THE ORLEANS PARISH MEDICAL SOCIETY, MARCH 28, 1881, BY THE ANNUAL ORATOR, F. W. PARHAM, M. D.

Mr. President and Gentlemen:—The Constitution of the Orleans Parish Medical Society, which has chosen me as its representative on this occasion, requires that its Annual Orator shall "deliver a public address, designed to interest in the objects of this society a non-professional audience."

I have been naturally prompted to select from the subjects of the day, one having some important bearing on preventive medicine. Among these, I know of *none* which has touched more closely the sensibilities of the people, or excited a livelier interest among the community at large, than the relations of Yellow Fever to commerce. Certainly, one of the objects of this organization, a branch of the Louisiana State Medical Society, is to influence public opinion to assist the medical profession in the carrying out of measures conceived solely for the public good. I, therefore, beg your indulgence for a short time, as I attempt to present for your consideration some ideas, which, I fear, I have but imperfectly expressed.

Ever since the beginning of the nineteenth century, this problem has fixed the attention and taxed the ingenuity of the people of New Orleans: Our commerce must be fostered and encouraged, but the health of the city must be protected. I cannot better express the apparent antagonism of the two interests, than by quoting from the able address of the Hon. James B. Eustis before the graduating medical class of last year. He said: "On the one hand, we have a strong popular belief, a fanatical popular alarm—I use the word fanatical to denote its earnestness—an undefined popular right of self-preservation, which finds its emphatic manifestation in what are known as shot-gun quarantines. On the other hand, we have the large, increasing and peremptory demands of commerce, which means intercourse with its necessities so closely interwoven into the very conditions of our daily existence, that any prolonged or unreasonable interference with its freedom makes us feel as though the circulation of our own blood was hindered. For this is an age of commercial activity, commercial enterprise, commercial development."

Let us first regard attentively the commercial aspect.

New Orleans had, for many yoars, suffered the results of war. Her dearest interests were disregarded and her most sacred rights trampled in the dust. When her people were disheartened by oppression, from which there seemed no relief, her sons, by a bold stroke for liberty, regained the seats of government, and the light of a new existence appeared to dawn. But a greater foe was at our doors, not to be successfully met by valor, nor defeated by the force of arms. The year 1878 has indelibly inscribed on the tablets of our memories the deeds of that enemy in our midst. We know the vast amount of physical distress entailed, and we all remember what injury our business suffered. But, notwithstanding all this unfortunate political strife of the years gone by, and our affliction by yellow fever, New Orleans has risen phœnix-like from the ashes of her misfortunes; and, turning from the gloomy vista of the past, she can see the landscape of her future spread out in all its beauty before her.

The signs of the times are, indeed, propitious. We need not, in these enlightened days, the favorable predictions of a Delphic oracle. Look around you! The evidence is before you. On every side the key-note of progress has been sounded, and could we but hear the music of the spheres, dreamed of by Pythagoras, it would but proclaim the activity of the universe. The energy of the nineteenth century has eclipsed the promise of the past. In nothing can we better discern the superiority of our time over the so-called "good old times" that have happily passed away, than in the wonderful and rapid advancement of the interests of commerce. Commerce, the bulwark of England's greatness, is pre-eminently the hope of the United States.

Even in the present stage of her growth, our country bids fair to rank, in the development of her vast internal resources, among the foremost nations of the globe. This great commercial prosperity cannot be the outcome of sectional effort. The strife engendered by the war will soon be a thing of the past. The people of this great Union, to secure its greatest destiny, must henceforth work together. Whatever political differences may agitate the minds of the country, on certain questions the sections must occupy common ground. Sectional jealousy should not blind the vision to natural advantages. On the geographical position of New Orleans we must base our hopes for her future. The people of the North, the East and the West have come among us. They have recognized our grand capabilities, and wondered that we have not made more progress. But when we regard the many difficulties that have checked the wheels of enterprise, when we consider the ills of climate, endemic malaria and epidemic yellow fever, when we remember the great revolution in our system of labor accomplished by the war and assign the proper influence to corruption in government, we have less cause to wonder. If New Orleans, under such depressing conditions, has taken the position, which she to-day occupies, do not we justly predict, under present favorable auspices, a much brighter future?

Among the triumphs of energy and of mind during the last ten years, Europe has her Mt. Cenis and St. Gotthard tunnels, but New Orleans has her jetties. By this, one of the grandest achievements of the past decade, deep water to the sea has been secured and the commerce of the world invited to our gates. Morgan's Railroad and connections have opened up to us the fertile fields of Texas, whose soil yields every product of the States. The N. O. Pacific will bring us into communication with other productive regions. We enjoy the most friendly relations with our sister-republic and she has, by her reception of Capt. Eads, evinced the most hearty co-operation with our government. Her government is at last established in the universal satisfaction of her people and her wonderful resources must soon yield their treasures to the world. The

Southern Pacific will soon invite into this rich but undeveloped country the enterprise and capital of the United states. The next ten years will chronicle the accomplishment of inter-oceanic communication by canal or ship-railway, which will shorten the route to California and the East and thus "give wings to commerce." Will not New Orleans claim a large share of the general prosperity?

For, New Orleans is practically the gate-way of this great Mississippi valley, a vast tract of country, watered by thousands of miles of navigable streams, which should float to our doors the rich and varied products of the most prolific soil in the world.

New Orleans, it is argued by some Northern friends, is destined to be to the Mississippi river, and to the Gulf and South-Atlantic commerce, what New York is to the Hudson river and North-Atlantic commerce. There is great reason for the prediction. We see, as the population of the United States increases, that the centre of density moves steadily towards the West. While it is unreasonable to assert that this centre will ever cross the Mississippi river, there is great ground for saying that, henceforward, if yellow fever be kept out, a great influx of population will begin, which will rapidly fill up the valley with a thrifty, energetic class, who will see in New Orleans the natural and most inviting outlet for the fruits of their industry and intelligence. European countries are beginning to recognize the advantages of New Orleans as a grain-shipping point. The enterprising farmers of the West have also realized this and are looking to New Orleans and the Mississippi river as the safest and the cheapest route to the European centres of demand. The improvement of navigation in the Mississippi river has been one of the leading subjects of the day. An appropriation has at last been obtained, a mite, it is true, for the needs of this great interest, but an augury of a more liberal spirit in the future. Even under present disadvantages we see yearly the barges of the great transportation companies descending the river, loaded with their millions of bushels of grain. These are annually increased in number and carrying capacity, since increased production demands increased facilities. Is the picture drawn from Utopia? Dowe magnify our advantages? Then, let us say of our city to the people of this Union, who now begin to rightly judge us, in the words of Daniel Webster, "She needs no encomium; behold her and judge for yourselves."

But while acknowledging our promise for the future, it is not meet that we disregard the obstacles, which may delay, if not prevent, its realization. We should thoroughly appreciate the difficulties that we must encounter. Admit that our future depends upon our commercial enterprise; how can we "give wings to commerce," unless we attend properly to guarding the public health? We cannot evade the issue. Take away

our interstate and our international intercourse, and what have we left? We must, therefore, see to it that our commerce be in every way encouraged and the most cordial relations cultivated with those communities, whose good will is so necessary to our existence. But can we effect this end unless we prevent the entrance of yellow fever into our city, or its conveyance to other places? This is certainly the question of the day. No system, which disregards either, or fails to give it the proper share of attention, can possibly redound to our permanent benefit. There is only a conditional antagonism between commerce and yellow fever. If we can make our city healthy and keep it healthy, we need have no fears for commerce.

When we examine the experience of the past we are apt to become discouraged. It may be asked: Has not yellow fever visited us almost annually for nearly one hundred years? and does not the lesson of 1878 teach us that all attempts to combat it are futile? It is, I contend, highly unscientific and unjust to ourselves to regard failure in the past the basis of our hopes for the future. Let us rather take courage from the successful attempts of New York and other cities in this matter of quarantine and redouble our exertions in the future. The cities of New York, Philadelphia and Norfolk are very surely liable to visitations of yellow fever, since they have frequently been infected; but they have not had an epidemic for a long time. We have, therefore, come to think they are exempt from its influence, and we have not given due consideration to the measures adopted by those cities, particularly by New York, for keeping out yellow fever.

We are, however, more liable, undoubtedly, than New York. *We* have suffered most from this dire scourge. It is, indeed, a wily foe with which we have to deal. Insidious in its approach, relentless in its attack, and perfidious in its truces with those invaded, now, as in the past, no one can with certainty predict the advent of this dread enemy or the desolation that may follow in its track. But, while we thus plead guilty to this charge, can we not truly say that it has not always been the actual existence of yellow fever in our midst that has done us so much harm? Viewing our misfortunes and those of Memphis and other cities, and feeling keenly the possibility of invasion of their own country, have not our neighbors had some reason in their madness? Can we wonder that the fears of our neighbors have often exaggerated our true condition and precipitated unjust quarantines against us?

We of New Orleans have met the enemy face to face and have often grappled with him; but our neighbors, if they have seen him at all, have only experienced his terrors and never learned his ways. We cannot, therefore, blame them for guarding themselves from real danger, but we think they wrong us much by shutting us off from the valley on the faith of unfounded rumor. They say we have had yellow fever so

often, they never know when to expect it again. We might add, their actions indicate that they think we always have it. But it is right, since we are, so far as yellow fever is concerned, the "sentinel on the watch-tower" of this great Mississippi Valley, that we should

1st, do our utmost to keep out the disease, and

2d, regard the complaints and requests of our neighbors.

Both ends will, I think, be attained by carrying out the suggestions of the following propositions:

1. The establishment of an efficient and acceptable system of quarantine to guard against the importation of yellow fever;

2. The attempt to accomplish the most thorough sanitation in New Orleans to prevent the development and propagation of that which may have gained a foot-hold here;

3. The adoption of a system of internal quarantine, a sanitary supervision of water-craft and railroad trains, to guard against conveyance of infection at the same time that communication is kept open;

4. The prompt investigation and reporting of all suspicious cases of fever from April till November.

You have all heard the earnest demand of our neighbors on the subject of quarantine, and you know that two influential bodies of our citizens have responded. You have, no doubt, closely followed the efforts of the Auxiliary Sanitary Association in behalf of sanitation, and you have observed the workings and the results of the sanitary supervision of steamboats, barges and trains, effected last summer. I will, therefore, leave these points for discussion by others. I desire to call your attention to the fourth, and urge, as strongly as may be, the necessity of carrying out its suggestions.

We may divide the reporting of cases into two steps:

1. The early search after and recognition by attending physicians of suspicious features in doubtful cases of fever.

2. The reporting to and investigation by a properly constituted commission of medical men, who shall make known in the proper manner the results of their examination.

The benefits to be derived from such a course of action can hardly be estimated. It has firm foundation in reason and its adoption is recommended by the force of the following arguments:

1. The sooner an infectious or contagious disease is recognized in our midst, the more promising will be the measures undertaken to eradicate it, or to prevent its spead. Recorded instances prove the truth of the assertion.

2d. Other communities demand this. They are interested parties and have a right to expect that their wishes should be considered. There is not a State in the valley that will not suffer pecuniary damage from the introduction of yellow fever into New Orleans, and the higher the disease extends the greater will be the injury to business. All other States in

the valley desire as strongly as our own that yellow fever be kept out of the country. They have, therefore, warned us that whatever measures for self-protection the exigency of circumstances may demand, will certainly be carried out by them, no matter what may be the consequences to us.

The people of Alabama and Arkansas, of Mississippi, Tennessee and Texas, mistrust us, and they have insisted on certain guarantees from us. They assert, with truth, as a comparison of our newspaper statements at various times with our subsequent sanitary reports will show, that we have frequently in the past, in order to keep open communication, concealed the existence of yellow fever by failure to report cases. They agree that, if we will faithfully report cases of fever as they occur, they will maintain to the last moment, compatible with their safety, free intercourse with us, relying upon us for timely intimation of threatening danger. They will not, as heretofore, establish ill-advised and unnecessary quarantines against us on the evidence of the wildest rumor. Suppose we say their complaints are idle and their demands unjust, do we not adopt the most short-sighted policy, if we assume the position of injured innocence and indignantly invite our promised isolation?

Last summer we all regard as an exceptionally healthy season in New Orleans, marked by an unusual freedom from yellow fever. Not with any view of arraigning the medical profession, but simply to enforce the argument, I will relate two incidents. One of the members of our profession, in conversation last fall with me, remarked that, during the past summer, he had had a genuine case of yellow fever in his practice. He had called in consultation another physician, who entirely agreed with him as to the nature of the disease. For the reason, as they asserted, that the reporting of the case would cause unnecessary alarm, they decided to suppress it. In another instance, a young physician requested an older member of the profession to see in consultation with him a very suspicious case of fever, but endeavored to make him promise to say nothing about the case. The request was refused, and the consultation was not held. The failure of physicians, heretofore, to report their sporadic cases of yellow fever has had its origin in two considerations: 1. Their desire to obviate alarm and prevent interruption of business; and 2. The pressure of public opinion. But you will, perhaps, all agree with me that the suppression of truth is not the best way to allay public anxiety. Occasionally one of these unreported cases is revealed, and then distrust and suspicion follow.

But perhaps the most potent cause is the influence of public opinion. I have heard well-informed non-professional people say, what is the use of making known to the world the existence of yellow fever, when the cases are so few as to indicate no possible danger of spread-

ing? It injures our trade and enables no other community to protect itself, because no conveyance of infection is threatened. Physicians, therefore, must be the unfortunate instruments of their will. It has too often happened that the boldness of a physician in executing public functions, imposed upon him, has been branded as unfaithfulness to the true interests of the people, and malice has been imputed to him as the main-spring of his conduct. Taking their lesson from such examples, physicians, particularly the younger members of our profession, have been intimidated, by the fear of losing reputation and standing in the community, into suppressing their reports and thus evading the law. Physicians, rising to the full dignity of their high calling, should, with one voice, condemn such action. They should, as scientific men, regard the exacting demands of science and report always their cases promptly. Honesty in all the walks of life, not only in behalf of ourselves and of own community, but also in behalf of our neighbors, *is* the best policy. But since the evil has its root in an unhealthy state of public opinion, public sentiment must be improved. But while we recommend a strict compliance with the commands of duty and of the law in this respect, we should pay that attention to the wishes of the public, which the circumstances demand. The way out of the difficulty has been made plain, as already indicated. The New Orleans Medical and Surgical and the Auxiliary Sanitary Associations, two influential bodies of our citizens, and many business men and others, have accepted the situation and have strongly recommended in addition to other measures the appointment of a commission of medical men. This commission must be ready at all times to answer the call of physicians. These gentlemen are to investigate thoroughly and make known in the manner suggested by the New Orleans Medical and Surgical Association, the result of their examination. Hasty diagnosis will thus be avoided, but the desired end effected. Public opinion within and without New Orleans should thus be satisfied, and medical men should welcome the inauguration of such a method, for they will thus be enabled to do their duty without incurring the responsibility of antagonizing the wishes either of this or of neighboring communities.

Without the hearty co-operation of the physicians of New Orleans, little can be accomplished. Medical men must consent to report their suspicious cases to the commission. To make the working of this plan effective, it is better to consider all doubtful cases, as yellow fever, until the commission declare otherwise. We all know that there exists an ordinance of the city requiring physicians under penalty of fifty dollars fine to report within twenty-four hours to the Board of Health all cases of yellow fever in their practice. We easily conceive how the law can be evaded and we have seen that it has accomplished very little except in times of epidemics.

The appointment of the commission will aid the law and obtain the confidence of the citizens of our own and those of surrounding States. Let the community, then, cry down the doctor who injures the good name of science and honor the man who honestly reports his cases.

Suppose we repudiate the demands of justice and refuse to entertain the suggestions of policy; then, we must consent to suffer the ills of quarantine and the history of the past will be repeated. We cannot build our fortunes on deception. We *must* establish ourselves in the confidence of our neighbors, else they will trade with other cities and leave us to our fate. The history of the decline and fall of New Orleans will never be written if we can successfully cope with yellow fever. The advancement of science will furnish weapons of defense and fair dealing with our neighbors, which does not mean suppressing truth and suggesting falsehood, will accomplish the rest.

We are regarding attentively the dangers that menace us —the invasion of yellow fever and the doubts of our neighbors. Let us remember that "dangers retreat when boldly faced and fronted," and that "thrice armed is he that hath his quarrel just."

At the conclusion it was moved and seconded that the Society approves the general tenor of the Annual Address and endorses the views therein expressed and held in the report on quarantine adopted by the New Orleans Medical and Surgical Association, at its meeting, February 26th, 1881, and further, that the president be authorized to appoint a committee to inform that Association that this Society is ready to proceed to the election of the experts mentioned in section 9 of that report, which recommends the establishment of a commission of Medical Experts to determine the nature of suspicious cases of fever in New Orleans from May 1st to November 1st of each year. The motion was unanimously adopted. Dr. Ernest S. Lewis was elected Annual Orator for March, 1882. After the assignment of work for the coming year the society adjourned.

F. W. PARHAM, M. D.,
Recording Secretary.

AMERICAN MEDICAL ASSOCIATION.

PHILADELPHIA, 1400 PINE STREET, S. W. cor. Broad.

The Thirty-Second Annual Session will be held in Richmond, Va., on Tuesday, Wednesday, Thursday and Friday, May, 3, 4, 5, 6, 1881, commencing on Tuesday at 11, A. M.

"The delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by *representa-*

tion in their respective State Societies, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States."

"Each State, County and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

☞ Secretaries of Medical Societies as above designated are earnestly requested to forward, *at once*, list of their delegates.

SECTIONS.

"The Chairman of the several Sections shall prepare and read in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective Sections. * * * *"—BY-LAWS, Art 11., Sec. 4.

Practice of Medicine, Materia Medica, Physiology:

Dr. Wm. Pepper, 1811 Spruce St., Phila., Pa., *Chairman.*
Dr. T. A. Ashby, Baltimore, Md., *Secretary.*

Obstetrics and Diseases of Women and Children:

Dr. Jas. R. Chadwick, cor. Marlborough and Clarendon Sts., Boston, Mass., *Chairman.*
Dr. Jos. Taber Johnson, Washington, D. C., *Secretary.*

Surgery and Anatomy:

Dr. Hunter McGuire, Richmond, Va., *Chairman.*
Dr. Duncan Eve, Nashville, Tenn., *Secretary.*

State Medicine:

Dr. James T. Reeve, Appleton, Wis., *Chairman.*
Dr. R. G. Jennings, Little Rock, Ark., *Secretary.*

Ophthalmology, Otology and Laryngology:

Dr. Dudley S. Reynolds, Louisville, Ky., *Chairman*,

Dr. Swan M. Burnett, Washington, D. C., *Secretary*.

Diseases of Children:

Dr. A. Jacobi, 110 W. 34th St., New York, *Chairman*.

Dr. T. M. Rotch, 77 Marlborough St., Boston, Mass., *Secretary*.

☞ A member desiring to read a paper before any Section should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements at least one month before the meeting.—*By Laws.*

Committee of Arrangements.—Dr. F. D. Cuningham, Richmond, Va., Chairman.

Amendment to the By-Laws offered by Dr. J. M. Keller, Ark.: In the election of officers and the appointment of committees by this Association and its president, they shall be confined to members and delegates present at the meeting, except in the Committees of Arrangements, Climatology and Credentials.

W. B. ATKINSON,

Permanent Secretary.

INVESTIGATION OF LEPROSY IN THE UNITED STATES.

At a meeting of the New York Academy of Medicine, held January 20, 1881, the following resolution was adopted:

Resolved, That a Committee be appointed by the President to investigate the extent to which leprosy prevails in the United States.

The President appointed as such Committee, Drs. H. G. Piffard, F. R. Sturgis, and G. H. Fox.

The Committee are desirous of ascertaining the actual number of lepers in this country at the present time, and to that end respectfully request any physician who may know of the existence of a case in his neighborhood to communicate the fact to the Chairman of the Committee, at No. 10 West 35th street, New York.

LOUISIANA STATE MEDICAL SOCIETY.

The Louisiana State Medical Society held its fourth annual meeting in New Orleans during March 30th–31st and April 1st. By arrangement with the Publishing Committee, the transactions and papers will be published in full in the May number of this Journal, and that issue will be enlarged sufficiently to meet this requirement.

While the meeting was not large, but, on the contrary, small to a degree that mortified many who had indulged cheerful expectations, it was still a meeting of much interest. The limited number in attendance was, undoubtedly, due to two different causes, neither of which is likely to influence the next meeting in a similar manner. These causes are: First—A failure to notify, in some direct manner, members in the country parishes of the date fixed for the meeting. Second—The difficulty in the way of travel to New Orleans, from many of the country parishes. The completion of several railroads, now in process of construction, will, by the next annual meeting, enable members from the parishes to attend with very little inconvenience. As soon as this system of roads referred to, affords the necessary facilities of transit between different parts of the State, it will be the policy of the State society to rotate in its meeting places, so as to hold its various sessions in convenient proximity to various sections of memberhood.

The following are the officers elected for 1882:

President, Dr. A. A. Lyon, Caddo Parish.
Vice-Presidents, Dr. D. R. Fox, Plaquemines Parish.
" Dr. J. P. Davidson, Orleans Parish.
" Dr. A. B. Snell, Iberville Parish.
" Dr. R. H. Day, East Baton Rouge.
" Dr. W. W. Ashton, Caddo Parish.
" Dr. J. D. Hammond, Morehouse.
Secretary, Dr. L. Salomon, Orleans Parish.
Corresponding Secretary, Dr. S. S. Herrick, Orleans Parish.
Treasurer, Dr. G. K. Pratt, Orleans Parish.

SANITARY COUNCIL OF MISSISSIPPI VALLEY.

This organization meets in Evansville on Wednesday, 20th inst. The meeting is expected to be one of very great importance, and we hope to be able to give our readers a full report in our next number.

CORRESPONDENCE.

GAYLORD, KAN., Dec. 27, 1880.

Prof. S. M. Bemiss, Resident Member National Board of Health, New Orleans.

DEAR PROFESSOR:—Your "word of explanation" in the November number of the *Medical and Surgical Journal* arouses again an interest in a subject, "though lost to sight to memory dear." The "press" and business men of New Orleans could con an instructive lesson from the history of quarantine at the port of New York, during the past fourteen years. In 1866 Swinburne, by rigid quarantine, kept cholera out of New York, and the city "press," on behalf of the "business interests," berated him for needless interference with *commerce*; but a few years later, when his successor, Carnochan, through lax regulations, infected the lower portion of the city with yellow fever, and a vessel sailing could not obtain a clean bill of health, "business interests" rapidly discovered that New York could hope to maintain uninterrupted relation with the outer world, only by keeping its own port free from disease, and that a rigid quarantine was the great desideratum to that end.

There is an adage about being the "bearer of unwelcome tidings," and Dr. Sternberg has perhaps consoled himself by remembering it during your late "heated term." I have, myself, had some experience as such. In 1873, while stationed with the United States troops, at Greenwood, La., I saw the first case of yellow fever occurring at that place and diagnosed it. A local physician, a gentleman of undoubted professional abilities, differed with me as to the nature of the disease, and reported, *sub-rosa*: "I was tryiug to start an epidemic." I

obtained isolation of the case, as also succeeding ones, and by so doing protected my troops and the inhabitants from an outbreak of the disease, as was fully demonstrated by the sad history of the Flournoy family. (I reported the epidemic at Greenwood in the November, 1873, number of the *New Orleans Medical and Surgical Journal.*)

It has taken an hundred years to convince our masters, the public, that yellow fever is *not* indigenous to the United States, and that its summer visitations can be prevented by an intelligent quarantine. How long will it be before they comprehend also that, if through any cause it *is* introduced, isolation and sanitation will limit its ravages and eradicate it. When that day arrives, the earnest physician, who discovers and reports points of infection and danger, will be applauded for his zeal, —not treated with contumely for making it known.

The well-known habit practiced these many years by the State Board of Health of Louisiana, of suppressing information of the occurrence of cases of yellow fever in New Orleans, renders the public mind very distrustful of any statements made by the Board during the "fever season." Such statements are usually taken *cum grano salis* by a discriminating public, who have learned the value of "assurances of safety." A few years since, while the Board was certifying and the daily papers loudly repeating the statement, that there was not a case of fever in the city, we witnessed the spectacle of the Governor of an adjoining State, issuing his proclamation of quarantine against New Orleans, declaring it to be an infected port!

In New York City the appearance of a contagious or infectious disease is duly chronicled in the daily papers, and people may escape it by avoiding the locality in which it prevails. The adoption of a similar rule by your Board of Health would restore assurance, both in and out of New Orleans, and the "business interests" would be gainers and not losers by it.

We, of the West, have a growing interest in the existence of yellow fever in Louisiana. It is patent to us that, within this decade, the Mississippi River will become the great carrier for the millions of bushels of grain that now find their way to Europe

through the Atlantic ports, and the nation that sent *Eads* to build you a doorway for the commerce of the world, asks only in return that you keep that doorway clean.

Trusting that I have not worn you out with my long letter, I remain most sincerely,

Your obedient servant,

M. F. Leary, M. D.

OBITUARY NOTICES.

Dr. A. K. Ramsey, one of Belton's oldest and most honored citizens, died at his residence in this city, Sunday, January 23, 1881, of pneumonia. He had been ill but a short time, and his death was wholly unexpected, and the announcement that he had passed away fell heavily upon the ears and hearts of our people, who held him in high esteem. His charitableness toward the poor and suffering, was largely in excess of his strength of body and means. His kindness of heart endeared him to all with whom he came in contact, and no man was ever heard to question his honesty and integrity. As a physician, Dr. Ramsey occupied a front seat in the profession, being a graduate of the University of Louisiana, having previously graduated in the literary department of the University of Virginia. The deceased was born in Marengo county, Alabama, March 11, 1833. He came to Belton in January, 1856, and has resided here ever since, taking a prominent part in every enterprise that tended to the advancement of the town and county. At the commencement of the war between the States he returned to Alabama, organized a company and was in active service in Virginia for four years, under the command of Gen. Wade Hampton. At the close of the war he returned to Belton, where he has since resided, engaged in the practice of medicine. He leaves a wife and children to mourn his death, and all of our citizens deeply sympathize with them in their great loss. — From the *Belton Journal* (*Texas*).

WAR DEPARTMENT,
SURGEON GENERAL'S OFFICE,
Washington, February 25, 1881.

It is with profound regret and a sense of loss, not only to his corps, but to the medical profession, that the death of GEORGE ALEXANDER OTIS, Surgeon and Brevet-Lieutenant Colonel, U. S. Army, is announced to the Medical corps of the Army.

Born at Boston, Massachusetts, November 12, 1830, he graduated with the degrees of A. B. and A. M. from Princeton College; entered the Medical Department of the University of Pennsylvania, and received his degree of M. D. from that Institution in 1850; visited Europe and prosecuted his studies in London and Paris, and returning to this country he established himself at Springfield, Massachusetts; appointed Surgeon 27th Massachusetts Volunteers, September, 1861, he held this position until appointed Surgeon U. S. Volunteers, August 30, 1864. After the close of the war he entered the Medical Corps, U. S. Army, as Assistant Surgeon, February 28, 1866; became Captain and Assistant Surgeon, July 28, 1866; Major and Surgeon, March 17, 1880, having received the four brevets of Lieutenant-Colonel of Volunteers, Captain, Major and Lieutenant-Colonel, U. S. Army, for meritorious services during the war. While Surgeon of the 27th Massachusetts Volunteers he served in Virginia, North and South Carolina, and was on special duty in charge of the Hospital Steamer "Cosmopolitan" in the Department of the South. Assigned to duty in this office July 22, 1864, he was Curator of the Army Medical Museum, and in charge of the Division of Surgical Records until his death.

He was editor of the Richmond *Medical Journal* for three years, member of the leading medical societies of America and corresponding member of various similar societies in Europe, and a contributor to prominent medical journals. Surgeon Otis, with his personal observations of the surgical collections abroad, brought indefatigable industry and untiring energy to the development of the surgical and anatomical collections of the Army Medical Museum, which he has made

the most valuable of their kind in the world. The compilation of the Surgical Volumes of the Medical and Surgical History of the war, has placed Surgeon Otis confessedly among the most prominent contributors to surgical history.

While on duty in this office Surgeon Otis wrote for publication no less than ten reports on subjects connected with Military Surgery, &c.; among which are his most valuable and exhaustive reports on "Excision of the head of the femur for gunshot injury," and on "Amputation at the hip-joint in military surgery." Of great culture, retentive memory, and with a remarkable facility of expression, he was, as a compiler and writer, conscientious in his analyses, giving his deductions from the facts before him with modesty, but decision. With such a record it is needless to speak of his zeal, his ambition or his devotion to his profession, and especially to the reputation of the corps of which he was so bright an ornament. While devoting himself to the preparation of the Third and last Surgical Volume (now more than half completed) of the Medical and Surgical History of the War, he died in this city February 23, 1881. His untimely death will be deeply deplored, not only by the Medical Corps of the Army, but by the whole medical profession at home and abroad.

JOS. K. BARNES,
Surgeon General.

DR. PHILEMON CHEW was born in Kentucky on the 2nd of July, 1816. He graduated at the age of 18 years, and in the winter of 1834 went to Philadelphia, to enter as a student in the University, where he graduated in medicine two years after.

He lived in Mississippi a few years, and then removed to Tensas Parish, where he spent the rest of his life. He served several years in the State Senate, as member from Concordia and Tensas.

Nothing can describe his qualities of mind better than his own words of another: "He was a man of large discourse of mind, with a vast fund of knowledge,—professional, classical, general; had an inexhaustible fluency of utterance, a chaste literary taste, an imagination ample in scope, and embellished

with every literary gem, the highest reasoning powers and polished rhetoric. Superadded to all these, he was a pure, faithful follower of Christ."

As a physician he was ever trusted implicitly. He had few equals and no superiors, and was very successful in his management of the most complicated cases. His books were his constant and loved companions, and such a wonderful memory was seldom vouchsafed to the children of men.

He remarked, in his last illness, that honor had been his watchword through life, and he hoped to die with his reputation pure and unsullied, as he had lived. What a loss, when such a man passes away.

He leaves a wife, five children and one grandchild to mourn his loss.

He died on the 21st of November, 1880, aged sixty-four years.

T. B. POINDEXTER, M. D.

Professor RICHARD O. COWLING, died suddenly in Louisville, on the 2d day of April. We regret exceedingly to record the death of a *confrère*, so distinguished in the possession of rare talents, excellent attainments, and most estimable disposition. His loss will be deplored in every rank of our profession, but the medical journalist will long continue to experience a pang of sorrow each time he turns over his files to miss the familiar name from the cover of one of his most valuable exchanges.

Reviews and Book Notices.

A Practical Treatise on Diseases of the Skin. By Louis A. Duhring, M. D., Prof. Dis. of Skin, Hosp. Univ. Pa.; Dermatologist to Phila. Hosp., etc. Second edition, revised and enlarged. 8 vo., pp. 644. Philadelphia: J. B. Lippincott & Co. 1881. [From J. C. Eyrich, 130 Canal Street, New Orleans. Sold by Armand Hawkins, 196½ Canal street. Price, in muslin, $6.00.]

The first edition of this work appeared five years ago, and immediately took its place at the head of authorities on derma-

tology, as the most complete and trustworthy treatise in the English language. The rapid progress of this branch of medicine at the present time calls for a new edition, which the author has prepared with great pains. All parts of the book have been revised, and new articles on sixteen different subjects are introduced; consequently this edition is about 100 pages larger than the previous one, although the type has been somewhat reduced in size.

No change will be observed in the general plan or scope of the work, for it was previously a complete treatise on the subject. Taken now in connection with the Atlas of Skin Diseases, by the same author, or the Photographic Illustrations of Cutaneous Diseases, by Dr. Geo. H. Fox, this volume answers fully the wants of general practitioners, and must be regarded as indispensable by those acquainted with its merits. S. S. H.

The Bacteria. By Dr. Antoine Magnin, Licentiate of Nat. Sci.; Chief of the Practical Labors in Nat. Hist. to Fac. of Med. at Lyons, etc. Translated by George M. Sternberg, M. D., Surgeon U. S. Army. 12 mo., pp. 227. Boston: Little, Brown & Co. 1880.

This work is divided into two parts, the first treating of the morphology of bacteria (in other words, their anatomy); the second, of their physiology, including the part played in putrefaction, in zymotic diseases and in surgical lesions. The following are the general conclusions drawn from consideration of various topics under these heads:

"We may sum up as follows the actual state of our knowledge upon the bacteria:—

"1. The bacteria are cellular organisms of vegetable nature.

"2. Their organism is more complicated than was for a long time believed. The principal points brought to light are: their structure, the presence of cilia, the nature of the substances contained in their protoplasm,—colored granules, grains of sulphur, etc.

"3. The forms of *torula*, *zoogloea*, *leptothrix*, *mycoderma*, etc.

"4. The multiple affinities of the bacteria, on the one hand with the algæ, on the other with the fungi, differently understood by authors, and their development, still unknown for the

greater number of species, make it impossible to classify these beings except in a provisional manner.

"5. This development, well studied in several species of *Bacillus*, has proved that bacteria may multiply not only by fission, but also by formation of spores, and even by veritable sporangia.

"6. These spores or permanent germs are the principal means by which these inferior organisms are disseminated.

"7. As to their *rôle* in fermentations, in putrefactions, in contagious diseases, and in surgical lesions, notwithstanding the considerable number of labors of which the bacteria have been the object in these different points of view, it is not yet possible to define it in a certain manner."

The conclusion that these low organisms are vegetable rather than animal, as was at first supposed from their movements, is derived from optical signs, and especially from chemical tests. Thus, vegetables are chiefly ternary compounds, while animals are composed of four elements, one being nitrogen. Ammonia is found to dissolve the eggs and embryos of animals and the bodies of the inferior infusoria, while it has no such effect on cellulose and the elements of reproduction in plants.

As to the origin of bacteria, the author presents three different modes, as follows:

"1. For some, these organs are produced by *heterogenesis;* that is to say, by creation outright from mineral or organic substances (spontaneous generation).

"2. According to others, they come directly from individuals like themselves, by one of the known modes of generation,—fission, spores, etc.

"3. Finally it is believed that they are derived from organisms already existing, and are nothing more than different states or phases of development of known species, of which the life-cycle is not yet discovered."

It is evident, from his discussion of these proposition, that he attaches most importance to the second mode. To the third he gives such limited range as the "transformation of spores into *bacteria*, *bacteridia* vibrios, etc., and in the different modes of grouping, that the cells of bacteria take in becoming zoöglœa, mycoderma, leptothrix," etc.

A few pages are devoted to the action of various agents upon bacteria. Elevation of temperature produces unlike

effects on different forms, some being destroyed at 113° to 122° F., while the permanent spores withstand more than 212°. They generally become torpid at 32°, but it has been found that the artificial temperature of—123° does not destroy their life. It seems probable, therefore, that the infection of yellow fever is not of this order of life, if living at all. The most energetic effects are obtained from ozone and carbolic acid.

The agency of Dr. Sternberg, in this volume, is not merely that of translator. A number of foot notes give the results of his own investigations in this field, particularly on the Havana Yellow Fever Commission of 1879. Five of the ten plates illustrating the text are heliotypes from photo-micographs made by him at Havana and New Orleans, while in the service of the National Board of Health. It need not be said that they are a valuable contribntion to the work.

This little volume does not pretend to exhaust a subject which is still on the threshold of investigation, but to the general medical reader it will prove more satisfactory than a larger one. Those who desire to pursue the study further will be greatly aided by a copious bibliography, which is brought down to date by the translator. S. S. H.

Syphilis and Marriage—Lectures Delivered at the St. Louis Hospital, Paris, by Alfred Fournier, Professeur à la Faculté de Médicine de Paris, etc. Translated by P. Albert Morrow, M. D., Phys. to Skin and Venereal Department, N. Y. Dispensary, etc., 8 vo. Pp. 251. New York: D. Appleton & Co. 1881. [Sold by Armand Hawkins, 196½ Canal street, New Orleans. Price in muslin, $2 00.]

So little attention has been paid to the relation of syphilis to marriage by teachers and systematic writers, that this special work supplies an actual want among the profession; but it will be especially valuable to the more intelligent portion of the non-medical public. The doctrines on the nature of syphilis, presented by the author, are not new to medical men, and most practitioners would prefer to find the same views in some systematic work, and expressed with greater conciseness; but in case of non-professional readers, it is precisely the thing

needed for instruction and warning. The book, therefore, merits an extensive circulation, and should be carefully read by young men and heads of families. S. S. H.

The Principles and Methods of Therapeutics. By Adolphe Gubler, M. D., Prof. Therap. Faculty of Med., Paris; Physician to the Beaujon Hosp. etc. Translated from the French. 8 vo. Pp. 445. Philadelphia: D. G. Brinton. 1881.

The divisions of this work are called chapters, but the style of composition clearly indicates that it was addressed as lectures to a class. As might be inferred from the title, the author considers rather the general properties of remedies than their special applications to diseases; and in these studies he prefers to adopt the clinical method, instead of the physiological, which latter at the present time has become the more popular among writers on therapeutics. Prof. Gubler's method is certainly more practical than the other, provided errors and fallacies in observation be eliminated, which is sometimes very difficult. The *vis medicatrix naturae* is a complicating factor, which must be *estimated*, as it cannot be *calculated*, and this requires extended observations upon the natural history of maladies pursuing their course without therapeutic interference.

The methods of applying remedies are prominently discussed and judiciously treated. The metric system, of course, is used, and the translator presumes that no rendering into our English method is needed in the text.

The subjects are treated in a philosophic spirit, and with great ability, as might be expected from one who has been pronounced a fit successor to the great Trousseau. This plan of instruction to students of medicine certainly would not answer as an exclusive one; but, if thoroughly supplemented by a course of clinics, would serve a useful purpose, especially to those well advanced in pathology and the fundamental branches of medicine. No more could this book be regarded as *the* text-book for students and practitioners; but it will prove very profitable reading and be worth careful study.

Although the plan of the work necessitates rather brief mention of special remedies, no less than 3 chapters of the whole 34, and part of another, are devoted to arsenic alone; and all this apart from special indications for its use. It is not apparent, either from the intrinsic importance of this substance, or from the author's appreciation of it, why he has shown it such partiality. Possibly he was in want of a hobby; but he does not act as if he took any special pleasure in riding it.

The book is fully indexed, excellently printed and well dressed in half morrocco binding. Price, four dollars.

S. S. H.

The Heart and Its Functions. Square, 16 mo. Pp. 95. New York: D. Appleton & Co. 1881. [In flexible muslin. Price, 40 cts. Sold by Hawkins, 196½ Canal street.]

This is No. 8 of the Health Primers, intended for popular reading. The following are the subjects of the five chapters: (1) the object of the heart; (2) its structure; (3) its function and how it is performed; (4) its relation to the general system; (5) how to maintain the integrity of its function.

This series of publications deserves the commendation of sanitarians to the public at large, and should have a wide circulation.

Aphorisms in Fracture. By Richard O. Cowling, A. M., M. D., Prof. Prin. and Prac Surg., Univ. Louisville. 12 mo. Pp. 70. Louisville, Ky.: Jno. P. Morton & Co. 1881. [In paper covers. Price 25 cts.]

This is No. 2 of Morton's Pocket Series. The main part of the volume consists of 131 terse aphorisms, a careful study of which would facilitate the passing of an examination on this branch of surgery. We presume that candidates for graduation would thank the professor, if he would enlarge the scope of the work in a new edition.

The aphorisms are followed by an editorial article, which appeared in the *Louisville Medical News* three years ago, upholding the plaster dressing for fractures, in opposition to the teaching of Prof. F. H. Hamilton. The volume closes with some criticisms of the author's doctrines, from leading surgeons.

S. S. H.

Hand-Book of Systematic Urinary Analysis, Chemical and Microscopical. For the use of Physicians, Medical Students and Clinical Assistants. By Frank M. Deems, M. D., Laboratory Instructor, Med. Depart. Univ. N. Y., etc. 12 mo. Pp. 30. New York: The Industrial Publication Company. 1880.

Expressed in the most concise language, this little volume will be found more convenient as a practical guide to examinations of the urine than the larger works.

A Text-Book on Human Physiology; designed for the use of Practitioners and Students of Medicine. By Austin Flint, Jr., M. D., Prof. Physiology and Physiological Anatomy, Bellevue Hosp. Med. Col., etc. Illustrated by three lithographic plates and 315 woodcuts. Third edition, revised and corrected. 8 vo. Pp. 978. New York: D. Appleton & Co. 1881. [Sold by Armand Hawkins, 196½ Canal st. Price in Muslin, $6 00.]

The first edition of this work appeared in 1875, and the second in 1879. The principal changes in the present edition are on the functions of the Malpighian bodies of the kidney, on animal heat and on the cerebral convolutions. The last has reference to their description only. As to the functions of the convolutions, the author limits himself to the location of the faculty of speech in the third left cerebral convolution; though he supposes that the corresponding one on the right side originally possesses this function, but that it is lost or diminished in right-handed persons, through the preponderance in use and activity of the left hemisphere.

This treatise was specially designed by its author for the use of students of medicine, and it certainly contains more matter that they are likely to be questioned upon before graduation. At the same time it will be found full enough to satisfy the wants of the practitioner; while the larger work of the author, in five volumes, was intended for consultation by medical teachers and writers. The established reputation of the author, both as teacher and writer in this department of medicine, and the favorable reception of the two previous editions, render an analytical notice of the book unnecessery and its commendation superfluous. S. S. H.

John Hunter and his Pupils. By S. D. Gross, M. D., LL.D., D. C. L., Oxon., LL.D., Cantab.; Prof. Surgery, Jeff. Med. Col., Philadelphia, etc. 8 vo. Pp. 106. Philadelphia: Presley Blakiston. 1881. [Sold by Armand Hawkins, 196½ Canal street.]

This volume grew out of the author's annual address before the Philadelphia Academy of Surgery. The first chapter contains Hunter's biography, with a critical analysis of his character and works, to which is appended some remarks on his contemporaries in Great Britain, Ireland and the Continent. The second chapter is devoted to brief sketches of Hunter's pupils.

An appendix contains a chronological list of 55 productions from Hunter's pen, between 1762 and his death in 1793.

In this work Prof. Gross occupies a judicial position, and not merely that of eulogist. The reader has Hunter exhibited to him not only as the philosophical surgeon and naturalist, but as a man, with human feelings and frailties--a picture faithfully and impartially drawn, and therefore presented as a study in the truest sense.

In this admirable little work of biography Dr. Gross evidences his own versatility, and establishes a new claim on the regard of the medical men of America. S. S. H.

A Guide to the Clinical Examination of Patients and the Diagnosis of Disease. By Richard Hoggan, M. D., Privat-docent to the University of Leipsic. Translated from the second revised and enlarged edition, by G. E. Gramm, M. D. 12 mo. Pp. 224. Boericke & Tafel: New York and Philadelphia. 1881.

This little book was prepared for the use of medical students as an introduction to clinical instruction, and might well serve as an accompaniement to the same for junior students. It should be commended by clinical teachers as a guide and an aid to their labors, and will be found a great convenience for its conciseness and the large range of subjects treated. Of course it is not to be regarded as a substitute for larger works, adapted to the wants of advanced students and practitioners. S. S. H.

Meteorological Summary—February.
Station—New Orleans.

Date.	Daily Mean Barometer	Daily Mean Temp'ture.	Daily Mean Humidity.	Prevailing Direction of Wind.	Daily Rain-fall.
1	30.09	59.5	92 0	S. W.	25
2	30.12	48.7	72.0	North	.....
3	30.09	52.5	75.0	North	.....
4	30.02	55.0	75.0	East.	.....
5	29.88	55.7	85.0	East.	18
6	29.72	61.0	94.0	S. E.	1.90
7	29.92	58.0	92 0	N. E.	52
8	29 73	59.0	94.0	East.	19
9	29.77	60.5	79.0	S. W.	18
10	29.85	61.2	82.0	S. E.	.....
11	29.95	56.0	68.0	N. W.	16
12	30.28	44.5	54.0	N. W.	.....
13	30.34	43.0	41.0	N. W.	.....
14	30.34	43.0	51 0	N. E.	...
15	30.33	52.5	70.0	N. E.	.....
16	30.38	56.7	67.0	East.	.....
17	30.26	59.0	68.0	East.	....
18	30.05	66 7	85.0	South	02
19	30 18	56.2	70.0	N. W.	07
20	30.24	53 5	76.0	North	08
21	30.32	52.7	61.0	North	.....
22	30.31	55.5	54.0	North	.....
23	30.26	60.7	52.0	N. W.	.....
24	30.19	61.5	58.0	S. W.	.....
25	30.11	61.0	73.0	East.	.....
26	29.85	63.5	92.0	S. E.	1.82
27	29.83	62.2	70.0	N. W.	43
28	30.14	56.7	40.0	N W	.....
29	.....	....	....	.....	.....
30	.....	....	....	.....	.....
31	.....	....	....	.....	.....
Sums	.....	.....	.....	.....	.....
Means	30.09	56.3	71.0	East.	5.80

General Items.

Highest Barometer, 30.40.
Lowest Barometer, 29.57.
Monhly Range of Barometer, 83.
Highest Temperature, 78° on 18th.
Lowet Temperature, 36° on 14th.
Greatest Daily Range of Temperature, 42°.
Prevailing Direction of Wind, East.
Highest Velocity of Wind and Direction, 52, South East, 6th.
Total Movement of Wind, 7,082 miles
Number of Clear Days, 11.
Number of Fair Days, 9.
Number of Cloudy days on which on Rain fell, 8.
Number of Cloudy Days on which Rain fell, 12.
Dates of Frosts, 13th and 14th.

COMPARATIVE TEMPERATURE.

1871.....		1876.....	58°.98
1872.....		1877.....	55°.9
1873.....60°.5		1878.....	55°.5
1874.....59°.1		1879.....	55°.8
1875..... 55°.9		1880.....	60°.4

COMPARATIVE PRECIPITATION

1871.....inches.		1876: 8.20	inches
1872..... "		1877: .98	"
1873: 1.93 "		1878: 3.50	"
1874: 3.68 "		1879: 2.13	"
1875.13.85 "		1880: 4.62	"

L. DUNNE,
Sergeant, Signal Corps, U. S. A.

Mortality in New Orleans from February 19th, 1881, to March 19th, 1881, inclusive.

Week Ending.	Yellow Fever.	Malarial Fever.	Consumption.	Small-pox.	Pneumonia.	Total Mortality.
February 26	0	5	22	0	7	121
March 5	0	2	15	0	11	94
March 12	0	2	26	0	21	140
March 19	0	2	16	0	13	121
Total....	0	11	79	0	52	476

ERRATA.

Page 1003, line 13 from bottom, read "though" I have not, etc.
Page 1008, line 4 from bottom, read "books," for book.
Page 1011, line 4 from top, read "from," instead of fram.
Page 1011, line 7 from bottom, read "chylopocitic," instead of chylopoctic.
Page 1012, line 5 from top, read perhaps "for life."
Page 1012, line 13 from bottom, read "haziness," instead of hazing.
Page 1013, line 15 from top, read "habitude," instead of hebitude.
Page 1015, line 7 from top, read "auscultatory," instead of ascultatory.
Page 1016, line 15 from bottom, read "resembled," instead of resemble."
Page 1016, line 13 from bottom, read "and" but for the etc.
Page 1019, line 13 from bottom, read "as it does the botanist," etc., in stead of as it does to the botanist.
Page 1022, line 9 from top, read "resemblance," instead of resembles.
Page 1022, line 20 from top, read "characteristics."
Page 1022, line 11 from bottom, read "filled."

NEW ORLEANS
MEDICAL AND SURGICAL JOURNAL.

MAY, 1881.

ORIGINAL COMMUNICATIONS.

Dengue.

By J. G. THOMAS, M. D., Savannah, Ga.

[Read at meeting of Am. Pub. Health Ass'n, 1880.]

SYNONYMS.

This disease has been known by many names. With the exception of "break-bone fever," as far as can be ascertained, the first name given to it was by the negroes of St. Thomas, who christened it "dandy fever" in 1827.

When it first made its appearance on that island about 1824, it was with some reason, supposed to have been brought over by a cargo of slaves from the western coast of Africa, and for a time was called African fever; but after 1827 the appellation given by native negroes gained the ascendancy. The term by which it is now known, and which is used by the French, Germans, Italians, and English, and which was accepted by the committee on nomenclature of the Royal College of Physicians and Surgeons of London, it first obtained in Havana in 1828. Writing for the *Boston Medical and Surgical Journal*, October 1828, Dr. Osgood says: "A new disease" has broken out in Havana which the Spanish have called "el dengue," which means literally "affectation," and which it will be observed implies the same idea that prevailed in the minds of the

negroes the year before at St. Thomas. This is the term by which it will be known in history, and as it was accepted by the College of Physicians and Surgeons of London, who have made the most successful effort to correct the confusion of terms which every accurate physician has felt exists in our nosology, so it should be the one used by all the profession, and the laity will soon adopt it. "Break-bone" fever is one of the oldest as well as one of the commonest names by which it goes, especially in this latitude, and it may well be doubted if it is ever completely divorced from it, for it describes a symptom far more common in the malady than the one given it by the West Indians. In fact it is only now and then that we see a case which illustrates the appropriateness of the term dandy, or affectation, but still they do occur. There is a large number of cases which though they are quite painful and severe, yet do not always put an energetic man in bed, and as he walks around, when certain muscles of the back, loins and hips are attacked, it gives to the whole body and limbs a peculiar stiffness and constraint in motion which recalls the aptness of the names given by an ignorant people.

It has been suggested to latinize the word dengue and call it *Denguis*, and this term has been made use of by a few authors.

Aden fever is a name that was given it in Calcutta because it was supposed to have been imported from Aden, in Arabia.

In Mecca, where it was carried, like cholera, by the wandering Musselmen in 1824 and in 1870, it was called "Aburunkabah," which means literally the "father of the knee," and was applied to the disease from the great pain it often produced in the knee joint.

It has gone by the name of "Scarlatina rheumatica," which would appear to confound it with two of the oldest and best studied diseases. Likewise, it has been called by several compound names similar to the latter, such as "eruptive articular fever," "eruptive rheumatic fever," "eruptive epidemic fever of India," and "broken-wing fever."

In the south of India it was called "mudak-mariata," which is said to be a Tamil word, and derived from two words,

"mudak," which means contraction or stiffness, and "mariata," the name of an idol or Hindoo deity.

NOTES ON ITS HISTORY.

We only have to go back a little further than a half century to find the first authentic record of epidemic dengue. It is true that Dr. Wood, of Philadelphia, thought that Dr. Rush had described it as epidemic in that city in 1780. I believe that Dr. Rush called the malady, he was then meeting with, "bilious remittent fever," and while we find, in looking back, diseases have not always been named or classed properly, and candor compels us to admit that our discrimination in diagnosis has not always been equal to the occasions, when new disorders or symptoms develop themselves, yet we are compelled to consider that Dr. Rush must have seen remittent many times before, and that he was only meeting with a familiar disease, perhaps somewhat altered in type. It is not easy to credit, that one so gifted by nature as he was, and who had cultivated his fine practical, perceptive powers, to such a degree, could have failed to have discriminated between an epidemic of dengue and bilious remittent. Possibly, we may have to modify our views in this regard, for it is conceded that yellow fever has been mistaken for bilious fever, and bilious fever for yellow fever at a much later date than that of Dr. Rush's observations. In passing, and as pertinent to this point, I have not the positive proof to assert it, yet I have the strong conviction that dengue has prevailed to a limited extent in many localities in the South in the summer of 1880, where it was not recognized as such.

Gabert describes an epidemic fever which prevailed in and around Cairo, Egypt, and which has been supposed to have been dengue, though it has not been accepted as authentic, and yet it may have been, for it certainly prevailed there several years later, notably, in 1870, when it was thought to have been imported from the direction of Mecca, Aden, and Zanzibar. The same doubt is thrown on the description of an epidemic given by Pezet, as having prevailed in Lima, Peru, in 1818. There are accounts which must be believed, that it

was prevalent in 1824 in some of the West Indies. Dr. Copeland says it appeared first in epidemic form in Rangoon, in 1824, and thence spread widely over India in 1825.

When the disease appeared in Charleston, Savannah, and other Southern cities in 1828, Dr. Waring, according to Dr. Dickson, thought that it was the same disease which had prevailed at Savannah in 1826, and which was called "break-bone fever." Dr. Dickson seems to doubt the identity of the two epidemics. The inference to be drawn from Dr. Dickson's writings is that he believed that the true eruptive dengue never prevailed in any of the Southern States until the latter part of the summer of 1828. I am not aware that any other writer upon the subject, of so much repute and accuracy, ever questioned the fact that what was called break-bone fever in Savannah in 1826, was the same malady which had swept over the West Indies in 1824. It is believed by some to have prevailed in more than one of the Southern States as early as 1824 and 1825, and admitted by all to have been generally prevalent in 1828, when it seemed to have disappeared until 1848–50.

Pazzio, who published an account of an epidemic of dengue as it appeared in Cadiz in 1871, says a similar one prevailed there as at Seville in 1864–68, and that its origin was traced to Africa.

In 1780 the native population on the Coromandel coast were attacked by a fever, which resembled dengue in more than one particular, but especially in the fact that all were affected, and there were no deaths. It prevailed on the western coast of Africa, at St. Louis, Senegal, and at the Island of Gazu, and also at the Canary Islands in 1845–48–56 and 1864.

Dr. Mellis, Dr. Charles, Mr. Verchere, and Mr. Sherriff, trace the epidemic in India of 1824, and 1870 directly to Aden, and from thence to Zanzibar. Thus it will be seen that most of the accounts that we get of the early appearance of this disease point in the direction of Africa.

It may be said that dengue has prevailed in India, Burmah, Thibet, Arabia, Egypt and other parts of Africa, North and South America, and in the south of Europe. Dr. Golding

Bird we believe was the first to suggest that some cases of disease described by Dr. Richardson, in London, as scarlet fever combined with acute rheumatism, were perhaps dengue. This is the only intimation that I can find of its appearance anywhere in Europe, other than those mentioned in the south of Spain.

ETIOLOGY.

The specific cause of dengue like that of yellow fever, cholera, epidemic influenza, etc., continues beyond our reach. As yet the most powerful microscopes, combined with the most delicate chemical tests, have failed to give us perfect results, in seeking for the essential germs of each one of them. Whilst we know from their laws, that they all have their own specific seeds, and we have often heard the cry of "Eureka," yet up to the present time we have had to content ourselves with the study of the secondary or developing influences, and upon these lines we have an array of accumulated facts and are progressing every day. That dengue has its own specific germ, which seems to operate when in the human system in a specific manner, admits of little doubt, and that it is susceptible of transportation and is in some degree infectious, its history seems to sustain. It appeared in Zanzibar, in July, 1870, and from thence followed the coast of Africa, and was imported into Aden by the ship Somalis. From Aden it followed the Arabian coast up to Martha, where it developed into an epidemic in 1871.

From Aden, also, it appears to have been carried into Bombay and Calcutta by the shipping trade. In both of these places when it first made its appearance it prevailed almost entirely for a time among the Jewish part of the community, and they were known to have the closest commercial relations with Aden. But the free communication which existed between Aden, Bombay, Anamara and Calicut was supposed to be the means by which the disease was spread from one place to another. Moodeen Sherriff, surgeon of the Triplicaine Hospital, Madras, says the troop steamers Jumna and Dalhousie conveyed the dengue from Aden to Bombay and Conamara in the latter part of December, 1871, and about the beginning of

1872 the disease made its appearance in Bombay, Poona, Conamara, and from the two first named places it was carried all over India by railways. Dr. W. H. Cock, in the *Edinburgh Medical Journal*, 1830, gives an account of an epidemic of dengue at the island of St. Bartholomew, West Indies, and he adduces an instance where on the neighboring island of St. Christopher the disease was entirely unknown, when three persons went down to St. Bartholomew by the sloop Maxwell, where the disease was prevailing, and carried it back to St. Christopher and it spread all over the island.

Such are a few of the fairly established instances of its portability by land as well as by sea. I venture the remark that if dengue was attended with the same fatality as cholera or yellow fever its transportability would be established as well as either of them. Whether after it has once prevailed in a place it ever becomes in some degree naturalized in an endemic form, and under favorable circumstances, susceptible of acquiring epidemic exaggeration, and thus becoming a true traveling epidemic, moving on by communicability through human intercourse, remains to be solved. For certainly, a like question has been before the profession for a long time in respect to one of the most pernicious disorders, without satisfying the minds of every one.

When dengue made its appearance in Savannah in the early part of August of 1880, and gradually spread over the entire city, assuming the most intense epidemicity, these questions were constantly revolving in my mind. After the most diligent investigation under the circumstances, I came to the conclusion that it would be impossible to prove that it was brought here, except perhaps by inference. It certainly was prevailing in our neighboring city of Charleston some weeks before the first cases were reported in Savannah, and there was daily communication between the two places. Whether therefore, it originated here this year, or crept noiselessly in by railway or sea, I will not pretend to say, though I do not hesitate to repeat that my view of the nature of the disease forbids the idea of its springing up *de novo*. That the germs of dengue have slept over in Savannah from 1850 to

1880, or that the disease has occurred here in sporadic form from 1850 to 1880, springing into epidemic activity in the latter year, I do not believe; and while my experience may not accord with that of others, having equal opportunities for forming an opinion, yet, I must say, that during a practice here of sixteen years, I am not conscious of having seen the true dengue until 1880. In order to endeavor to settle some of the points above alluded to, on November 13, 1880, I addressed a circular to all the physicians of Savannah, containing certain questions to which I requested answers. One of these questions was, "Whether they had any facts bearing upon the origin of dengue here this summer?" Another was, "Whether they had any theory with reference to its origin?" These questions were sent to about twenty-nine physicians. Nineteen or twenty replied. Of these there were three or four, whose answers led me to suppose, that they believed it was due to malaria, and that the disease was nothing more than a form of expression, which our fall fevers had assumed. More than two-thirds of them replied, that they had neither facts nor theories with reference to its origin. One answered that he had no facts bearing directly upon his position, but that his theory was that it was brought from Charleston.

IS IT INFECTIOUS?

I must say in discussing this point that while I have seen many instances, where infection would have been expected, and where none occurred, yet daily observation for several months, has impressed me with the idea that it may be infectious, and at times propagated by human intercourse. I have thought that if its course could be narrowly watched, after it enters a place, that its gradual spread from one block of buildings to another would be discovered. It certainly was the case, that in most instances after attacking one member of a household, in a few days the others displayed some symptoms of the disease. An instance came under my immediate observation, where a gentleman who had been in town for several weeks, went to the country and had the disease. His wife nursed him there through it, and upon his recovery she came

to town with him, and was seized with it, within a few hours after her arrival. There is certainly much in the history of dengue, which goes to establish presumptive evidence of its infectiousness. In India this theory has been strongly maintained by the majority of the authors that I have been able to consult. Mr. Sherriff says, "that it is highly contagious, and in this respect it exceeds small-pox, measles, and all other eruptive diseases." Surgeon Verchere, who was in charge of Fort William, where there was stationed a force of European troops, says: that the only way he could account for the great discrepancy in the number attacked among the privates and the officers, was, that the men in the line when seized with the disease were at once removed to hospitals, and taken away from contact with their comrades; whilst on the other hand, the officers when they took it, remained in their quarters and were constantly visiting each other. He goes on to say that it was the same at the Hastings barracks, where he also was in attendance, and that there, the people nursed each other, and the percentage of cases was very high; that all the hospital assistants, medical students, and hospital servants had the disease. He asserts that the evidence was undoubted that communities suffered in proportion to the extent to which they were exposed to the infection. From more than one source, we gather that in India it attacked all races, classes, sexes and ages alike; people in good hygienic condition suffering more than others in less favorable circumstances, but less exposed to the infection.

A FEW OF THE SYMPTOMS.

Dengue is a disease of a variety of types. The study of the malady through several months has impressed me that it is peculiar in this regard. The common belief is, that it is a trifling complaint attended with a good deal of pain and temporary suffering, but never fatal, and hence it has been lightly spoken of. Our text book teach us that it is a mono-paroxysmal fever, of short duration, accompanied with aching and pain in the muscles of the limbs, back, etc., and constantly followed by an eruption, and there is the end of it. In the greater

number of cases, all this is true, but the whole story is not told. It is a fact, that it is rarely attended with fatal results, but my observation is, that there are few disorders which express themselves in so many ways, or that are subject to such serious complications, and that have such distressing sequelæ following in their wake.

A case of simple dengue has usually but little prodromata, and where there are any, they consist in general malaise, chilliness, headache and loss of appetite for a day or two before the attack is developed. But generally there is little warning of its approach. A person rises in the morning feeling perfectly well, and is suddenly seized whilst engaged in his daily occupation with sensations of cold running along the spinal column, pains in the limbs and joints—perhaps only one joint of a finger or toe. I have seen it in several instances begin with children by a convulsion; a child being waked up at night by a spasm, who, perhaps, had not shown previously the least evidence of ailing. The temperature begins to rise at once, and attains its maximum usually in twelve or twenty-four hours. The fastigium is generally very short, and the defervesence is rapid and characterised by a succession of remissions and exacerbations, the temperature of each remission reaching lower, and that of exacerbation each not so high as that of the preceding, until it has fallen one, to one and a half degrees lower than the natural heat of the body.

During the next few days, if the case is closely watched with the thermometer, it will be found that the temperature fluctuates from a degree below, to one or two degrees above the normal heat. By the end of the sixth or seventh day there is a very slight rise again, being a secondary fever; but, as a rule, this heat soon subsides, and temperature remains normal, unless there is a relapse, which is not uncommon even in the mildest forms of the disease. After complete defervescence the pulse often becomes slower than natural, and occasionally runs down to 60 or 65 per minute. During the pyrexia the pulse is moderately quick and generally soft, skin usually hot and dry (occasionally moist), loss

of appetite with nausea, and a very peculiar, bitter taste in the mouth. The bowels are variable, oftentimes inclined to constipation with borborygimi and painful flatulence. I have seen a few cases begin by attacking the mucous membrane of the alimentary canal, in the form of a painful diarrhea or dysentery. Dengue is an eruptive fever, and characterised in a certain percentage of cases by successive crops of different forms of eruption. In some cases there is an initial rash resembling mild scarlatina, but this is very evanescent, and occurs at the very beginning of the attack, and disappears the first day, and hence is very easily overlooked. I have seen it begin as red patches in the face or forehead and coalesce, giving an uniform redness which might be mistaken for mere flush. This is occasionally over the whole surface of the body, and then it becomes a homogeneous dull redness, more dingy than the bright scarlet of scarlatina. The secondary or terminal rash occurs after the defervescence of the fever, oftentimes from the 5th to the 8th day, but have seen it on the 15th day. The terminal rash is far more frequent in dengue than the initial, but as has been remarked, I have seen it appear in successive crops. In the majority of instances the terminal rash is miliary in form, but have seen it resembling measles, urticaria, herpes, etc. This brief description will in part represent a mild case of simple dengue running its usual course. But there are cases which are even milder, and also cases far more severe, and much more protracted. In the midst of an epidemic there is a very large percentage of cases, which have some of the symptoms—such as white tongue; bitter taste in the mouth; headache; prickly sensations in the eyes; very slight pains in the limbs; but as far as we know, have no fever; and yet in a few days they will show the characteristic eruption well marked. These cases have been termed "dengue sine febre." This type is perhaps more common among children, and the first intimation oftentimes that the child had the disease, is the appearance of the terminal eruption. A severe attack of dengue is ushered in much like the milder form, suddenly, with chillness along the spine, pains in the limbs, back,

head, etc.; and with every symptom intensified. As the fever rises there is intense throbbing of the temples and forehead; great intolerance of light; dilated pupils; eyes red and congested; fever from 104° to 106°; stiffness in the nape of the neck; rheumatic pains in every part of the body; a feeling as though the bones were being pulled apart; occasionally swelling of the joints and articulations; white furred tongue (I have seen it clean); loss of appetite with a loathing at the sight of food, and a peculiar bitter taste in the mouth. The initial rash is often limited to erythematous patches on the face and neck, chest and arms, sometimes appearing like angry blotches of prickly heat. The forehead becomes swollen and puffy, the eyelids œdematous and the lips thickened and prominent, all betokening serious determination towards the head. Urticaria is more often the initial eruption in the severe cases, and it is accompanied by the most intense itching, which causes inordinate scratching, leaving the marks of the finger nails upon the flesh. From some of these when they begin to improve there is decided desquamation, and in a few, the skin of the soles of the feet peels off, not unlike scarlatina; and the tenderness and some slight desquamation and peeling have been known to continue for several weeks * The intense pain in the head is very distressing and from the results that now and then follow, must be due to congestion of the brain or its meninges. The heavy aching and throbbing of the temples and balls of the eye, with dilated pupils, are marked and significant symptoms. I have seen a few cases

* These are cases where the eruption comes out in successive crops every week or ten days, for months after recovery. Whether it is due to the poison of the disease, or to the condition of the stomach, is not always easily decided. There have been those who have considered the symptoms as altogether symptomatic of the gastric disturbance, and that the intensity of the eruption, and extent were proportional to that disturbance. That those who were known to be dyspeptics had the eruption more extensively than others; that literary and sedentary characters, and those whose occupations were such as were likely to derange the chylopoctic organs suffered most from nausea, and vomitings, and other symptoms of gastric disorder, and in such cases, the eruption was always most extensive and marked. Upon the principle, which is well known, that there are certain vegetables, and animal diet, which will occasionally produce an effervesence on the skin, and sometimes nettle rash. An enthusiastic follower of Brunssais, would see in this the "veritable gastro-enteritis."

where I dreaded coma, and where there was indisputable evidence of the brain coverings being involved. I saw a most interesting case of this kind, where the pupils of the eyes became permanently dilated, with almost complete loss of sight perhaps. After a few days the heat moderated, but still there were irregular exacerbations of fever for three months. At the end of the second month she was taken out of bed and placed in a reclining easy-chair every day, and began to gain a little strength; but, throughout a long convalescence, there were constant recurring attacks of intense throbbing in the eyes and temples, and at such times the temporal artery would stand prominently out like a threatened apoplexy. This case has resulted in glaucoma, and I has been operated upon by Dr. C. R. Agnew, of New York, with a faint hope of saving her from total blindness, he has very kindly furnished me with the following note of the condition of her eyes, six months and a half after her first seizure of dengue:

"Mrs. T—'s present state is as follows: Glaucoma simplex in both eyes; vision gone in right eye; vision reduced in the left eye to uncertain counting of fingers at six inches; both pupils dilated and insensible to light, and the anterior chambers shallow, the lenses being somewhat pressed forward; ciliary vessels moderately turgid; tension of the eye-balls increased (T. x 2), opthalmoscopic appearance; broad, very deep excavation of both discs; details of fundus indistinct on account of hazing of media. March 15th, 1881, double iridectomy upwards, under ether."

Thus, it is that we have in the severe forms of dengue the nervous centres suffering very much, but it is not confined alone to this type, for there is evidence within the reach of the thoughtful and vigilant physician that in a few of the milder forms of the disease there are cerebral lesions and neurotic complications.

DURATION.

Dengue is doubtless a self-limited disease. In the vast majority of cases it runs its course in from three to eight days, but I have seen it last much longer, in fact after it has run over a certain period it has no limit that I am aware of, the heat will rise and fall most irregularly, and at times give hopes

that the fever is at an end, and then treachously return again; and in this way keep up for weeks or even months. It has become a habit with the profession to call every fever typhoid which does not terminate in a few days. By way of keeping up the popular custom and appeasing the mind of anxious friends who do not understand the laws of diseases, and who do know that typhoid is a long fever, some may call the protracted cases of dengue typhoid; but I have been unable to see anything like typhoid in them, save that they have fever, and that it is prolonged into weeks. Such cases need not embarrass our diagnosis, although they are liable to do so, for throughout their course the semiology of dengue will always be present. The swollen and heavy looking face, like the face of a person who had been sitting over a hot fire; the congested and maturating eyes with open pupils; the hebitude of mind; the recurring soreness in the muscles and joints, with hyperesthesia of the surface; the tough, viscid, ropy mucus in the mouth and throat; the feeling now and then of faintness in the horizontal position; the enlarged papillæ of the edge and tip of the tongue; the regular, perhaps inclined to be constipated bowels; the great irregularity in the exacerbations and remissions, and the constant inclination of the heat to fall below normal, without any material abatement of the serious symptoms; the intense and peculiar bitterness of taste in the mouth, together with the conspicuous absence of the leading symptoms of typhoid should enable any ordinary diagnostician to make the distinction.

COMPICATIONS AND SEQUELÆ.

Aside from the nervous complications attending and following dengue, there are no sequelæ so common as those which appertain to the heart. I am unable to say in what percentage of cases the heart is affected, but they are doubtless quite frequent, and besides being very distressing, they prolong the convalescence into weeks and sometimes months. I presume that in all epidemics of dengue there are a certain number of cases which have a most prominent rheumatic feature in them. I am led to infer that they differ very much in this regard, as

well as in other respects. It is certain that an epidemic will change from week to week, or from month to month. In other words during one month, we may see one type prevailing mostly, and later on another type will be more commonly met with. In the hot months of August, September and October I rarely saw cases with decided rheumatic symptoms, whereas, later in the season, and after the cold weather began, this type became more common. Whether the cold had any influence in producing this change, I was unable to decide. I imagine that in some epidemics rheumatism must have been one of the most prominent features in a majority of the cases, from the fact that it has been called "scarlatina rheumatica," "eruptio-rheumatica," etc. The question has often suggested itself to me as to whether dengue affects the heart in the same way that rheumatism is known to do. I am inclined to think that it does not. I do not think that the heart is as seriously affected, or as permanently disabled by dengue as it often is by rheumatism, and am sure that in the majority of cases where heart troubles follow, there had been no special rheumatic symptoms primarily. This complication is not apt to occur in the early stages of the disease, but comes on, either after the fever has subsided or after the second or third week of its progress. It may occur in the mild as well as in the severer forms of fever. My impression is that it most generally attacks the muscular structure of the heart, but I have seen pericarditis and endocarditis as the result. Where the muscle of the heart alone is involved, we are apt to have extremely tedious convalescence. Such patients do not suffer a great deal of pain, but complain of a distressing feeling of debility and lassitude, together with mental sluggishness, depression of spirits, dullness and *ennui*, making the least exertion an infliction. I have stated that a disposition to faint is a peculiar and very characteristic symptom of dengue. This feeling often comes over patients as they lie in bed, and sometimes is a very distressing one to them. In such cases the heart should be examined very constantly, for it is in these that we most frequently have the muscular structure of this organ involved. They have a very rapid and weak pulse, oftentimes without

any fever, and if so, very little. In pericarditis, we sometimes have very little or no pain at its inception, and then it may come on suddenly in the region of the heart, extending up to the left shoulder and clavicle. Occasionally we have sudden prostration, which becomes quite alarming. The heart beats tumultuously, the respiration is short and quick, with pain at every expiration. A close ascultatory examination of such a case will find the pericardium involved. Partial paralysis is also one of the occasional complications. I saw one case where facial paralysis came on at the end of the second day of the fever. There was complete loss of motion in the muscles of the right side of the face and lips, with inability to close the right eye; the mouth was drawn to the left side; and there was anesthesia of the conjunctiva with congestion of the left eye, Several weeks elapsed before recovery. Peripheral paralysis or paresis of the forearm and brachial muscles now and then occurs. I have seen cases where the patient could raise the arm above the head, but it would fall immediately to his side again—he manifestly not having the power to hold it there. I have been at a loss to decide in a few cases where there had been frequent vagrant pains, whether they were due to neuralgia or that species of pain which occurs in posterior spinal sclerosis, or progressive locomotor ataxia, but upon closer examination, was satisfied the suffering was over the territory of recognized nerve trunks and their branches.

There are pulmonary complications, which upon close study can be traced to dengue. In the early stages we have very constantly a troublesome cough which may remain and annoy long after the fever has subsided. "It most generally assumes the form of catarrh of the fauces, and upper parts of the breathing apparatus. This may extend down the larynx and trachea, or it may travel down the esophagus. In the former, cough is the most conspicuous symptom, in the latter a constant rising of phlegm in the mouth, but I have seen the saliva flow so freely as to give the idea to those around of ptyalism. In the vast majority of instances, by care and proper treatment, the cough soon subsides, but occasionally it does not, and in rare cases serious pulmonary trouble has re-

sulted from it. In Bengal, dengue was supposed to very frequently develop into a form of phthisis. I saw two very rapid cases of phthisis, which had some peculiarities about them which I was disposed to think were due to dengue. I also treated a most singularly obstinate and malignant ulceration of the throat, where the tonsils and a portion of the palatine arches sloughed off, which I never would have thought of attributing to the influence of the poison of dengue, had it not been that this very unusual sequel had been noticed in more than one instance by some of the profession in India.

Glandular swellings, which have been always noticed as a complication in dengue, were not at all common in the first months of the epidemic, but during the past winter, and especially since January, 1881, there have been many cases of this type; the swelling being principally around the neck and throat; parotid glands sometimes involved. Mumps prevailing at the same time made it often difficult to distinguish between them.

Dr. Dumaressy wrote an account for the *Boston Medical and Surgical Journal* (No. 32, September, 1828), of the epidemic of dengue, then prevailing at New Orleans. He says that in many there was inflammation of the urethra, which resemble so nearly "blenorrhœa luodes" that it was pronounced to be that; but for the violent asseverations of the patients of their innocence, this feature of dengue would never have been discovered. I have observed a few cases where there was irritation of and discharge from the urethra and neck of the bladder which seemed to be due to the same cause.

DOES IT REPEAT ITSELF?

I do not think that one attack of dengue furnishes any immunity, whatever, to a future one. On the contrary, whilst the epidemic is in progress, once having had the disease makes a person more liable to it than before; in other words, relapses are extremely common. Dr. Charles, of Calcutta, thought that whilst one attack did not confer absolute protection from its recurrence, yet it did to a certain extent. He had excellent opportunities of forming an opinion upon this point, as it

EXPLANATION.

This heat chart represents a case of Dengue of two months duration. Record begins on the 3d February, ten days after seizure. The temperature was taken and noted every two hours, and from this record this chart has been made. The first ten days—not represented—the fever probably averaged higher than at any other period. The heat line illustrates most clearly the irregular exacerbations and remissions in Dengue. Beginning with the fourth week, for ten days the patient was entirely unconscious; for more than a month showed great habitude of mind. Pupils much dilated, with intolerance of light. Patient now slowly convalescing—March 25th, 1881.

prevailed more than one season in succession in Calcutta. Whether, therefore, those who have had the disease one year, are liable to it the next I cannot say, but I am sure that I have seen it repeat itself five or six times in the same individual during the past season, and wherever a person having had the disease, afterwards took cold, or any other slight ailment, it constantly assumed the livery of dengue. I may say also that I attended two persons with it, who informed me that they had it in 1828, and several who had the most lively recollections of its pangs in 1850.

DOES COLD ARREST IT?

To this question I must reply most empathically in the negative. The disease made its appearance in Savannah in the early part of August, 1880, and in September, October and November it prevailed as an epidemic. Few people escaped it in some form who were here during those months; for if there ever was a disease which requires tribute from every one who comes within its influence it is dengue. The winter of 1880-81 has been unprecendently cold. The weather records, I make no doubt, will show the lowest continued temperature for several decades, and yet I have seen the malady in every month during the winter. A large number of the citizens who were away for the summer, did not return until late in November, or the first of December, when the epidemic had spent most of its force; but many had it nevertheless. The cases during the winter have been vastly less in number, but if anything severer in type, at any rate more protracted.

IS IT A FEVER OF ONE PAROXYSM?

There are a large number of cases which run a mild and simple course having but one paroxysm, with perhaps a slight secondary fever. But in many where the thermometrical record was kept regularly, the fever was found both to intermit and remit, oftentimes without any regard to the hour of the day. In this feature dengue presents at times a strong contrast to our winter malarial fevers, as well as typhoid, both of which nearly always decline in the early morning and exhibit an exacerbation in the evening.

The idea of dengue being always a mono-paroxysmal fever arose prior to the constant use of the thermometer in practice, and that this error should have been kept up so long is easily comprehended, for, in a long case, after a few days the skin feels to the touch very cool and natural, but accurate observation will show that there is still abnormal heat in the blood.

WHAT IS ITS PATHOLOGY?

Of its pathology there is little known, except by inference. Being proverbially a non-fatal malady, there have been but few opportunities for studying it in a pathological sense. There is absolutely nothing known of its morbid anatomy. I believe that when dengue has been studied more thoroughly, that it will be ascertained to be at any rate the remote cause of death more frequently than we have heretofore been led to suppose, and yet I am compelled to say that, usually, in its worst form, with symptoms, which in any other disease would probably prove fatal, we may expect ultimate restoration. It seems to be the law of dengue that recovery ensues, just as it appears to be the law of some other epidemic diseases that death must follow. But as I have seen two of the most important vital organs involved in its complications, with very grave symptoms, I must believe that it is more often fatal than it has the credit of being.

DOES IT EVER DEVELOP INTO YELLOW FEVER?

From its earliest history in the West Indies and America, dengue has by a certain number of very reputable observers been associated with yellow fever. Prevailing as it does mostly in the same latitude, it has by coincidence been a forerunner, and it has followed epidemics of yellow fever, and in consequence of these facts, associated with several symptoms, which have some resemblance, in a few cases, now and then to be seen, it has been stoutly maintained that the two diseases were due to the same causes. Dr. Osgood was perhaps the earliest to hold this belief and advocate this theory. He, as has been said, wrote an account of the first epidemic of dengue, which as far as we know ever occurred in Havana. His article appeared in the October number of the

Boston Medical and *Surgical Journal*, 1828. He says that the yellow fever had been prevailing in Havana for some months previously, but had almost entirely subsided when a "new disease" sprang up which the Spaniards called "el dengue." He tells us that the new disorder spared none, that it "attacked the natives as well as the transients," and he makes the important observation that even those who had had the yellow fever but very recently were not exempted by the new intruder. We must suppose that dengue was "new" at that time to the Havanaians, but certainly yellow fever was no novelty to them. Dengue had prevailed on some of the sister islands the year before, notably the Island of St. Thomas, where, as aforesaid, it had received the name of "dandy fever" and when it broke out in Havana, the inhabitants giving it a name in their language which signifies almost the same as the term which the English speaking negroes bestowed upon it, appears as if they had recognized the appropriateness of the name, and that it was literally a stranger to them. We can perhaps excuse Dr. Osgood for not discriminating between the two fevers a half century ago, but with all that has been acquired since, and with all the appliances that obtain at the present, it is unaccountable that any one should still confound them. We may allow that Dr. Osgood was fully up with the medical knowledge of his day; but there was no real expert knowledge of the two diseases in existence at that time. It requires experts to discriminate between diseases, as it does in the botanist to distinguish one plant from another. We may have two diseases resembling each other very much, as we may have two plants or trees looking alike, and yet be entirely different to the eye of the expert.

Dengue and yellow fever must both be classed as fevers. They have been considered as fevers of one paroxysm, and their duration in many cases being approximately the same, and there being a slight resemblance in a few cases of dengue to the metaptosis, which is so marked in yellow fever, some physicians have concluded from this feature that they were due to the same cause. There are a few cases of dengue when the fever begins to decline, which appear to change their type,

and the pulse diminishes in frequency and suggests the idea of yellow fever. But there is a strong contrast in the two diseases even whilst this metaptosis is taking place. In yellow fever whilst there is a falling of the pulse there is a rising of the temperature, and in dengue there is no such divergence, but we have the heat descending with the pulse. This feature of apparent resemblance has been more dwelt upon by those who advocate their identity than any other symptom, and thus it will be seen that by careful observation this argument falls to the ground. This feature, is far less common in dengue than it is in yellow fever.

It is highly probable that in many instances the causes of these diseases have prevailed at the same time, and where such was the case, they may have partaken of each others character. There are those in the profession who advocate the theory that they may be hybridous. This was said to be the case in the Island of Bermuda, in 1837. It appears to be a settled fact that one attack of yellow fever furnishes a certain amount of immunity from another. No one claims that the exemption is perfect,and yet all experience teaches that it has its effect. If this be so, and dengue and yellow fever are identical, then an attack of the one or the other ought in a manner to exempt from a future recurrence of either of them. This would appear to be logical reasoning. But is this a fact? Most decidedly not. Dr. Osgood, states, that in the first outbreak of dengue in Havana, persons contracted it who had but very recently recovered from yellow fever. Yellow fever prevailed in Savannah in severe epidemic form in 1876, and but few persons who remained in the town escaped its influence. When dengue made its appearance in 1880, I think the medical profession were quite interested to observe whether a previous attack of yellow fever would give an exemption from dengue. As far as I know there is but one opinion, and that is, that it does not.

It is a well recognized fact that yellow fever, even in its mildest form, has a decided hemorrhagic tendency. The poison appears to act upon the blood and produce a dyscrasia, so that wherever there occurs an abrasion, or blister, it is liable to bleed severely; this dyscrasia of the blood is oftentimes so

great that the vessels cannot hold it well, there being a constant tendency to sipe through the walls. It is in this way that we have black vomit. It has been contended that dengue has the same tendency. If so, I have failed to see the faintest appearance of it in a single instance. I have seen a few cases with slight epistaxis, but much less of this than is seen in typhoid fever. In dengue the mucous membrane of the mouth and throat is constantly much involved, and we have sometimes a damask redness of the gums, cheeks, fauces and posterior third of the palate. In such cases the follicles of the mouth, etc., are much enlarged and prominent, and we have a great deal of tough, ropy mucus, which is dreadfully annoying, causing the patient to vomit and retch in the effort to raise it. If the straining has been very violent, we may have streaks of blood upon the phlegm, and very rarely a little bright red blood is brought up which is evidently from an abrasion in the œsophagus. I have seen the œsophagus very much involved, with a feeling of obstruction in deglutition. One case came under my observation where an abscess formed low down in this tube, broke and discharged a quantity of pus.

Albumen in the urine has become one of the diagnostic symptoms, which is very much relied upon in doubtful cases of yellow fever. It is as near pathognomonic as any other. I examined a large number of the severest cases of dengue, and did not find a trace of it in a single instance. The urine is generally abundant, acid in reaction, and free from sediment. I saw a few cases of retention, but never one of suppression. I found the records of only two deaths of dengue in India among the English troops, where there were post mortem examinations made. Both of them are said to have had heart disease, and no other light is shed upon the dark subject by these lone autopsies. Whether they were examined with the view of settling the vexed question under consideration, we are not informed, but I suspect not, for the reason that the belief in the identity of the two diseases does not prevail amongst the English profession in India. On the contrary, Mr. Sheriff and others thought that dengue presented symptoms which apparently made it a

compound of two diseases—that it was caused by a mixture of two kinds of materies morbi, one of which is like that of an eruptive fever, and the other the same as rheumatism or gout. Hence, when we think of the several maladies with which it has been confounded, we might with equal propriety say that it is a compound disorder of rheumatism, scarlatina, cerebro-spinal meningitis and yellow fever, for it has been mistaken for each of them. But I consider dengue, *as sui generis*, presenting at times, some slight resembles to several diseases, but having its own distinctive features with abundance of evidence for recognizing it as a substantive. There is one remarkable peculiarity of dengue which, in itself, ought to settle the question of its not being the same disease as yellow fever; I refer to its benign nature, as far as the destruction of life is concerned. While I do not regard it as the light and trifling complaint it has often been supposed to be, on the contrary, fully realizing that it is subject to very serious complications, yet with all, when we compare it to the perniciousness of yellow fever, its benignity is one of its strongest characteristic. Take it in its severest type with a temperature of 106°, and every symptom not only distressing but ominous, and it will always give us immeasurably more of hope, when we recognize it, than yellow fever. Take it when it assumes a slow, continued form, running on for weeks and even months, in spite of our best endeavors to check it, and we can make a more favorable prognosis than we can in typhoid fever. Take it when we have cerebral, or meningeal complications, with the mind of our patient wandering, and filled with hallucinations and illusions, and yet we can cheer and comfort the anxious friends and attendants, with the surety that all will be well in the end. Take it in its tedious and weary convalescence, when despair is written on every lineament of the patient's countenance, and we can instil hope into his mind, that he will ultimately regain his strength and buoyancy. Take it when the patient is up one day and down the next, or when from palpitation of the heart the most dreadful forebodings are perpetually haunting him, and yet we can give him assurance that he will be better. That it does destroy life in rare instances, I fully believe, but this is not the rule

I think that I have seen instances where it snapped the chords of life when the heart was previously weak and diseased. But it was then intercurrent in its effects, and hence must require further and more thorough study before we can assign with exactness its influence in producing death.

I have said that the cause of dengue is not destroyed by cold. In this regard, I think, it differs from yellow fever. I do not think there can be a shadow of doubt that cold will arrest, to all intents and purposes, an epidemic of the latter, but I do not think the same can be said of the former.

TREATMENT.

Dengue being a self-limited disease in the vast majority of cases, the physician finds it his simple duty to make the patient as comfortable as possible, and allow the disease to run its course, being always vigilant as to the complications which may arise. To ease pain in the limbs, back, etc., morphia is his sheet anchor. I have found a mixture of morphia, tinct. gelsemium and tinct. of Aconite, a happy combination to meet many of the indications. The morphine subdues pain, the tinct. gelsem. appears to relieve the tendency to congestion of the brain, and the aconite lowers the fever. In the rheumatic type, and especially where the temperature runs high, I have found the salicylate of soda of most decided benefit. It removes the aching of the limbs, and the swellings about the joints, and if pushed to its full extent, say 5 to 12 grs. every two hours, it soon reduces the temperature.

The bowels which are often inclined to be constipated should be opened in the early stage and after that a daily evacuation should be secured. The use of digitalis, where the heart becomes affected gives the very best results in strengthening this organ. In a long tedious case, the proper nourishing of the patient becomes of the utmost importance. To take care of the digestion and conserve the strength of the patient, and combat symptoms as they arise, will tax all the energies that the medical attendant can bring to bear upon his case. To do this, he must always be on guard and follow the expectant method, for there are certainly no known remedies which with absolute certainty can be calculated upon to jugulate a continued case of dengue.

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Case of Monstrosity.

By C. C. BURKE, M. D.

TEXARKANA, TEXAS, March 20, 1881.

Dear Sir—Enclosed I send you photographs of a pair of twins, I delivered on the 12th inst. It is one of the most remarkable cases known to American obstetrics. Their mother, Mrs. L. R. Blackstone, is a native of Atlanta, Georgia, aged 23 years; has been married 18 months; miscarried twice, once at six months, again at six weeks. She is fair complexion; light hair, blue eyes; nervous temperament; weight, ordinarily, 110 pounds. No twins on either side for generations back. You will see from their photographs that

these children are well formed and fully developed in every particular. The connection seems to be of a bony character, commencing about or just below the sterno-claviculax articulation and extending down to the umbilicus, the two children having one common sternal bone; the connection measures 7 inches in length. The false or floating ribs are as in other natural children, there is but one umbilicus, one cord and but one placenta; each child has a separate chest, abdomen and hips; each has two arms, hands, two legs and feet; each a separate head, perfect in formation; their features are regular, symmetrical—in short, they are perfect little beauties, with a fine coat of black, glossy hair. I have named them Texarkana in honor of our thriving city, as we have two cities connected by a State line, two States by a city. The children measure 17 inches long and weighed 14½ pounds; the heads of each measure occipito-frontalis, 4½ inches; in biparietal, 3 inches; across their chest, 7 inches. They were still-born, the difficulties prevailing during the progress of labor, necessitating decapitation of one of them. The mother is still living, and will, I think, recover. It required an extraordinary amount of tact and coolness to engineer the case through and save the mother, as convulsions and hemorrhage were furious and profuse. I have the little girls in preservation in alcohol for the benefit of medical science. Would like to hear from the profession generally. You can use this if you like. What process is best to preserve them?



TEXARKANA TWINS.

The Vital Statistics of New Orleans as Taught by the U. S. Census, 1880.

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The whole of the following Table No. 1, and part of Tables Nos. 3, 4, and 5 have been compiled from data derived from advance sheets in manuscript, forwarded by Gen. F. A. Walker, Supt. of the U. S. Census, and due to his friendly courtesy. No such table, as is Table No. 1,—giving the number of persons in New Orleans with their sex, nativity and race, *at every year of life,* was ever before published; nor is it probable that the census of 1880, when published, will contain these data, because, considerations of economy require that the specifications for every year of life shall be condensed in decenniads or other periods of years.

Statistical tables are designed not for entertaining reading, but for instructive reference, and it is believed that the various data now to be recorded will constitute a source for frequent and valuable reference during the next ten years. The Table No. 1 has been so arranged that very little study will enable one, with little trouble, to secure an answer to any questions which concern the details specified in the table. Attention will be called to the answers to some of the questions of greatest interest, but, three preliminary comments must precede these.

In the first place the orignal manuscript contains the warning that, "this statement is still subject to possible corrections by reason of the discovery of omissions or duplication of names in the lists of inhabitants returned." In the second place, it is observable that there is reported to be a notable increase of population in every tenth year from 20 to 110 years, a considerable increase in every tenth year from 25 to 95, and a corresponding decrease in the years immediately succeeding. Such increases and decreases are in flagrant contradiction to nature's law, and these reported violations of the

truth indicate, no doubt, the large number of persons in our population who are too ignorant to report their correct age to the census-enumerators, and who, when interrogated, are unable to answer more exactly than, "about 30," or "about 40," instead of 29 or 41, etc. In the third place, it is observable, that an exceptionally large number of centennarians are reported in 1880, as in all previous censuses, of New Orleans. This habitual excess was long cited as a conclusive proof of the satisfactory and very superior sanitary condition of New Orleans; but, research has conclusively proved that, not only in New Orleans, but also throughout the United States, the number of centennarians varies chiefly with the ignorance of different communities, and with their consequent lack of records of birth, so that centennarians are always most numerously reported among our Indians, and much more numerously in the colored than in the white population. These manifest errors, as well as others less obvious, should remind us that neither census-enumerators, nor all those who furnish them with the information they record, are distinguished for their enlightenment and for the accuracy of their knowledge; and therefore these errors teach that a census cannot be absolutely correct, but can only present us, as it does, with the closest attainable approximation to the truth, and with facts which are *relatively* correct and therefore are fairly *comparable* with the same facts, secured by the same methods, and reported for other communities.

Some of the lessons taught by the census of 1880 in connection with preceding censuses, and with the statistics of the Board of Health will now be considered.

1. CHANGES IN AND PROGRESS OF THE POPULATION.

Since the City of New Orleans had a population of 116,375 in 1850, of 168,675 in 1860, of 191,418 in 1870, and 216,143 in 1880, there was an apparent increase of 52,300 from 1850 to 1860, of 22,743 from 1860 to 1870, and of 24,725 from 1870 to 1880. But, much of this increase was apparent rather than real, since it was due to the repeated extension of the municipal limits, so that the New Orleans of each succeeding decenniad included

communities additional to those of the preceding decenniad. In 1852, Lafayette, then in Jefferson Parish, and with a population in 1850 of 14,190, was annexed to New Orleans; not until 1870 did the city of New Orleans and the parish of Orleans become coterminous, Algiers having been then annexed; not until 1870 was Jefferson city, in the parish of Jefferson, annexed, and not until 1874 was Carrollton, in the same parish, annexed. To determine our real increase in population, it is indispensable to compare the number of people residing at different periods on *the very same* area of territory. This comparison is, as accurately as is now practicable, as follows:

Population of the Present Limits of New Orleans.

COMMUNITIES.	1850.	1860.	1870.	1880.
City of New Orleans, } Orleans parish.	116,375	168,675	191,418	216,143
Algiers }	3,085	5,816	.....	.....
Lafayette	14,190	.....	.....	.....
Jefferson City	.....	5,107	.....	.....
Carrollton	1,470	1,756	6,495	.....
Total population on the present area of New Orleans	135,120	181,354	197,913	216,143

It is thus manifest that the actual increase in our population was 46,234 during the ten years 1850–1860, and only 34,789 during the twenty years 1860-1880, that is 16,559 from 1860 to 1870, and 18,230 from 1870 to 1880. Hasty conclusions on the part of some may be corrected by recalling the fact, that the excessive increase in our population from 1850 to 1860 occurred in spite of the unprecedented prevalence of yellow fever during this decenniad, when the four disastrous epidemics of 1853, 1854, 1855 and 1858 devastated this city, those of 1853 and 1858 having never been equalled at any time in the history of New Orleans. These epidemics no doubt diminished but they failed to check the great and incessant immigration of unacclimated foreigners to this city. To this cause was due both the increased population and the increased prevalence of yellow fever.*

* During the ten years, 1851–1860, there arrived in New Orleans from foreign countries 293,885 passengers, while only 46,164 arrived during the ten years 1870–1879, as reported by the United States Bureau of Statistics.

What were the sources of the increase in our population from 1860 to 1880? The details are recorded in Table No. 2, and onlp brief reference will be made to the chief facts. The three facts of greatest importance are as follows: Since 1860, and as a result of the civil war, foreign immigration, which always furnishes an excessive population from 20 to 50 years of age and especially of males, was so arrested that the foreign born population of 65,997 in the parish of Orleans in 1860, had decreased to 47,854 in the more extensive city of New Orleans in 1870, and to 40,582 in the still more extensive city in 1880. This great loss of 25,417 foreign born population during the past twenty years has been offset by the gain of 32,320 colored population, a result also of the war, and by the gain of 34,747 native white population. The third fact and the one of greatest importance is that our gains have been greatest in females and in children, for, such was the effect of the civil war that even in 1880 New Orleans had 9974 *fewer white males* from 20 to 50 years of age than in 1860, and in 1880 had an excess of 14,263 females, instead of an excess of 2159 males as in 1860. Notwithstanding, then, the considerable increase in our population, New Orleans is still much weaker than in 1860 in those elements of population on which its chief strength depends; the population of laboring and self-supporting age is more heavily burthened with dependent children, the aged and the sick; and, the vigorous adult males are very much more heavily burthened with every class of dependents. Although the population of children has greatly increased, yet the present death-rate and birth-rate of New Orleans, as of many other large cities, continue to teach that any increase, certainly any great increase, in the total population will depend on immigration.

2. MALES AND FEMALES.

It is physically and morally a misfortune that New Orleans has an excess of 14,263 females; of these, there were 7009 white females in excess of white males, and 7,254 colored females in excess of colored males; the latter being, in proportion to population, an excess three times greater than in the white population. The female excess chiefly occurs at the

period of life when such an excess is most unfortunate, for, from 15 to 45 years of age there is an excess of 4,974 white, and of 4,820 colored females.

Child-Bearing Females.—The breeding women, that is, those included in the thirty years of life, 15 to 45 years of age, number 56,794; while the males, for the thirty years, 20 to 50 years of age, number only 42,624; that is, there are only about three males from 20 to 50 years of age for every four females, from 15 to 45 years of age. Even if these females contented themselves with the males from 20 to 60 years of age, there would still be left 6,850 of them without a mate Of white females, from 15 to 45 years of age, 3,176 would be left without a white mate, even if content with the males from 20 to 60 years of age.

Marriages.—By Act No. 80, April 27, 1877, the Board of Health was constituted the agent to record marriages and births, as well as deaths; the Legislature thus indicating its appreciation of the great importance to sanitation of the statistics of marriages and births. Therefore, it is only during the past four years that New Orleans has had any such published statistics. Thus far they have proved so defective that, although they are a tax on the community, they are valueless to the sanitarian. The law is very evidently not enforced. Whether this failure be due to defect in the law, or to negligence of the Board to execute it, the self-evident and lamentable failure demands prompt correction. During the four years, 1877–1880, the annual average of the marriages reported was only 1,387, and for the year 1880 the following facts deserve record:

MARRIAGES REPORTED IN NEW ORLEANS IN 1880.

Both White	1,049
Both Colored	243
White and Colored	6
Total	1,298

The statistics of eight European nations (see p. 51, American Almanac, 1881), yield from 15.5 to 20.3 annual marriages. to every 1,000 population. The United States is claimed to

furnish conditions more favoaable to marriage than are furnished by Europe, and if the conditions in New Orleans are even as favorable as in Europe, then there should be in this city not less than 3,350 and not more than 4,388 marriages annually. If the marriages in New Orleans are less numerous, then an extraordinary immorality prevails.

Births.—The average annual births reported for the four years, 1877–1880, were only 2,768, and for the year 1880 the report is as follows:

BIRTHS REPORTED IN NEW ORLEANS IN 1880.

White	2,442	Males	1,425
Colored	296	Females	1,313
Total	2,738	Total	2,738

In addition there were 350 still-births, which are, as is usual, excluded from the table of births. Statistics from the same source, above referred to, report that in eight European nations the annual births to every 1000 population nearly double the marriages, varying from 26.1 to 40.3. Therefore if the population of New Orleans is as prolific as are European populations, there occur in this city annually not less than 5640, nor more than 8710 births. Other data permit a closer approximation to the truth; for, the census of 1880 reports 5041 living children under one year of age, and the Board of Health reports that 1247 of the same class died, in addition to 350 still-born; hence, there were in 1880, not less than 6638 births, of which 6288 were of living infants. It is not at all probable that either the census or the Board of Health reported any as living or as dead who were not, but it is almost certain that some who were living or who died were not reported, therefore, 6288 births of living children should be deemed the minimum number, and it is fair to presume that the annual births in New Orleans are *about* 6500. Even this estimate is small, when compared with the number of child-bearing women. The number of annual births furnishes one of the two factors necessary to estimate the natural increase of a population, unaided by immigration. The past ten years, 1871-1880, were the healthiest

decenniad probably known to New Orleans, certainly the healthiest known since 1845, when our mortality statistics first became somewhat reliable; but, notwithstanding this fact, the average annual deaths have been 6891,—that is, as is unfortunately too frequent in large cities, probably somewhat in excess of our annual births.

3. THE VOTING POPULATION.

Males over 21 years of age.—Fraudulent voting is so frequent and so gross an outrage, that it becomes the duty of every citizen, who attaches to the purity of the ballot box the inestimable value it deserves, to familiarize himself with the elementary facts concerning the strength of the voting population; otherwise, he becomes an easy victim to the sophisms of demagogues. Many errors are taught, many wrongs are committed, by means of the ambiguous use of the term—"voting population"—and of the confounding therein of four different things, which may be designated as follows, viz: (1) the population of males over 21 years of age, from which the voting population is derived; (2) the voting population; (3) the registered voters, and (4) the actual voters. These four classes constantly diminish in number, varying with circumstances. The voting population excludes all those males over 21 years of age who are idiots, insane, criminals, and not naturalized, or not entitled by duration of residence to vote; the greatest difference at different times and in different places, between the number of males over 21 years and the number of the voting population, is due to the very varying number of adult males not naturalized. It is evident, though often forgotten, that in all cases the voting population, or the males entitled to vote, must be considerably less than the males over 21 years of age. Sickness, indifference, and such causes greatly vary in their influence in so reducing the number of registered voters, that usually not more than about six out of every seven of those entitled to vote become registered voters, and probably never more than nineteen in every twenty. From the same causes, the result is inevitable that the actual voters, who on any occasion go to the polls, must always be considerably less numerous than the registered

voters. These preliminary truths are indispensable to protect the reader from misinterpreting the following statistics for 1870 and 1880. It should be remembered that these statistics exclude Carrollton in 1870, but include it in 1880:

Males over 21 years of age in New Orleans.

	1870.	1880.
Native white	12,884	20,382
Foreign white	22,426	19,017
Colored	12,402	14,004
Indians and Chinese	25	....
Totals	47,737	53,403

In further illustration of this subject, the following data have been derived from Mr. Chas. Cavanac, our able and zealous Supervisor of Registration.

Voters Registered in the Parish of Orleans, Aug., 1880, *to Nov. 2d,* 1880.

	White.	Colored.	Total.
Native	14,797	7,888	22,685
Foreign	7,530	258	7,788
Totals	22,327	8,146	30,473
Voters "who write their names,"	20,774	3,021	23,795
Voters "who make their marks,"	1,553	5,125	6,678
Totals	22,327	8,146	30,473

Actual Voters in Orleans Parish at the Presidential Election, Nov. 4th, 1880.

Hancock, (D.) 17,332; Garfield, (R.) 6978; Total, 24,310.

Preceding facts may be summarized by stating that, in 1880, New Orleans had 53,403 males over 21 years of age, that this number yielded, after deducting an unknown number of idiotic, insane, criminal and unnaturalized males over 21 years, an unknown number of males entitled to vote. However, after deducting all those not entitled to vote, and adding thereto those who had the right but neglected to register, 53,403 males over 21 years of age yielded 30,473 registered voters, and these yeilded 24,310 actual voters. Thus, not quite three in every five males over 21 years registered; and not quite five, in every six of those registered, voted.

4. THE MILITIA.

Males 18 to 45 Years of Age—The law of Louisiana renders militia duty voluntary, not compulsory, but limits the period of life to the above age. In 1880 New Orleans had the following possible force of militia, viz: Native whites 21,173, foreign whites 9,691, colored 10,347—a total of 41,211 males from 18 to 45 years of age.

5. SCHOOL CHILDREN.

Males and Females 6 to 18 Years of Age.

Article 224 of the Constitution of 1879, limited the public school-children, who had previously consisted of those "between six and twenty-one years," to those "between six and eighteen years" of age. The census of 1880 specifies the following details respecting these children:

Population of School-Children, 6–18 Years, in New Orleans in 1880.

	Males.	Females.	Total.
Native white	20,309	21,732	42,041
Foreign white	483	594	1,077
Colored	6,363	7,344	13,707
Total	27,155	29,670	56,825

The following additional facts have been contributed by Mr. Wm. O. Rogers, our experienced and universally honored Chief Superintendent of public schools, in New Orleans:

Pupils Enrolled in the Public Schools of New Orleans in 1880.

Males	12,672	Whites	18925
Females	12,716	Colored	6,413
Totals	25,348		25,338

It is *estimated* that these pupils were distributed by ages, as follows:

Number of Pupils in 1880 *at the Ages Specified.*

Between	6 and 8	years of age	6,347, or 25	per cent.
"	8 and 10	"	7,616, or 30	"
"	10 and 12	"	5,078, or 20	"
"	12 and 14	"	3,808, or 15	"
"	14 and 18	"	2,539, or 10	"
Totals			25,388, or 100	per cent.

It is further *estimated* that about 8,000 of the children of New Orleans from 6 to 21 years of age are receiving education in other than the public schools.

6. MORTALITY IN NEW ORLEANS IN 1880.

The death-rates of 1880 possess special interest for two reasons. In the first place they have peculiar interest because at this, as at each decenniad, one of the two factors indispensable for the calculation of death-rates, namely, the number of the population is more accurately determined, and, therefore the death-rates for 1880 are a closer approximation to the truth, than are likely to be again determined prior to 1890. Communities, like the units which compose it, are very prone to exaggerate their own importance, and it will be an exception to the rule if, during each of the next ten year s, New Orleans should not annually boast of an unfounded increase of population, which will necessarily cause two evils, viz: a reported death-rate lower than the actual one, and a more numerous voting population than will really exist. Hence, it is now worth observing, that unless causes for prosperity, other or greater than those present during the past twenty years, should prevail, as we have reason to hope they will during the next ten years, there will be no justification for estimating our annual increase of population at more than 2,000, thus attaining from 236,000 to 240,000 in 1890. In the second place, the death-rates of 1880 deserve special interest, not only because more accurate, but also because they refer to an unusually healthy year, which may serve as a basis for instructive comparison for the years immediately to succeed.

In 1880 the death-rate for the whole population was 26 per thousand. Sanitary science teaches that the death-rate, even of cities, might be reduced to about 15 per thousand, and very certainly can be reduced to 20. There is no reason to doubt that if the surface and sub-soil of New Orleans were thoroughly drained from the river to the lake, an enormous reduction in its death-rate would at once follow. But, until this fundamental necessity of sanitation is accomplished, we will be forced to congratulate ourselves that a death-rate, as high as 26 indicates for us an exceptionally healthy year. In fact, since our records

have been at all accurate, only three similarly healthy years have been reported. The year 1879, immediately succeeding the destructive epidemic of 1878 was healthier, the death-rate not exceeding 24, constituting this year the healthiest one on record. The year 1868, immediately succeeding the disastrous epidemic of 1867, was also unusually healthy, the death-rate having been about 29. Prior to this, no year can be found similarly healthy until we go back to 1845, during which year the death-rate did not exceed 25.7*—a fact which deserves the special consideration of those prone to hasten to conclusions, for, in 1845 New Orleans did not enjoy the unquestionable benefits either of a State Board or of a National Board of Health, or of an Auxiliary Sanitary Association. The exceptional succession of two such remarkably healthy years as 1879 and 1880, notwithstanding the increase in and greater density of population, is certainly very encouraging.

The death-rates recorded in Tables Nos. 3 and 4 confirm some instructive and often repeated lessons. The mortality of females is much less than of males, about 30 of the latter dying to every 22 of the former. The least mortality occurs in white females, next in white males, next in colored females, and reaches its highest point in colored males. The difference between the minimum death-rate of white females (19.2) and the maximum death-rate of colored males (39.7) is so great, that twice as many die of the latter as of the former.

Analyzing the periods of life at which the greater mortality of the colored population occurs, the following facts are noteworthy. From birth to the twentieth year of age, the colored death-rate is much greater than the white death-rate, the colored death-rate continues to be higher to the fortieth year, but, those negroes who survive their fortieth year then gain about the same chances of life as the whites. Table No. 4 indicates

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*The Annual Report for 1880 of the Louisiana State Board of Health publishes, p. 226, that in 1845 the deaths were 2783, the population 89,261, and the death rate 31.17. The first item is correct, but the last two are not in accord with the U. S. census, which assigned to New Orleans about 100,000 population even in 1840 ("102,193," including the small village of Algiers), and a pro rata estimate of the population in 1845 would not amount to less than 108,000.

that the negroes' chances of life, after the ninetieth year, suddenly become nearly twice as good as the whites' chances. This is incredible, and is believed to be due to the cause already referred to, viz: to the credulous ignorance and enfeebled memory of aged negroes, and consequently to the unreliable testimony given by them to the census-enumerators. In proof of this, Mr. Cavanac, Supervisor of Registration, testifies, that several registered negro voters were willing to take oath that they were 160 years old, having accompanied Washington and his Army in their march from "Old Virginny "to New Orleans! One of these modern Methusalahs raised his hand prepared to swear on the bible that he was 300 years old! Apparently then, the census-enumerators deserve some credit for limiting these extravagancies within 135 years of age, though even this limit belongs rather to romance, than to statistical science. In fact, the progess of vital statistics in modern times teaches, with great emphasis, that centennarians even in the healthiest countries are so very rare that no one claiming to be over 100 years of age should be credited, unless a record of birth or conclusive proof is submitted to substantiate the claim.

The death-rate of children has been aptly termed the barometer of the public health. Except during the severe prevalence of yellow fever, our colored death-rate is always higher than the white, and this excess is always specially observable in the children under two years of age. The fact, that in 1880 there died 154 white children under two years of age in every 1000 of such population, while the corresponding number for the colored children was 264, is by no means exceptional. In fact, it is remarkable,—in view of the old teachings, and the still prevalent popular belief that tropical countries are less fatal to negroes than to whites,—that throughout the West Indies, throughout the United States from Maine to Texas, and wherever the vital statistics have been collected, the colored habitually exceeds the white death-rate.

Some attribute this, in part or in whole, to some physiological pecularity of the negro, to a feeble endowment of vital force, while others find an adequate explanation in the greater ignorance and poverty of the negroes, and consequently in their

habitual subjection to less favorable sanitary conditions. The writer confidently believes that the latter reason is the chief if not the whole cause.

The United States census of 1880, states that during the preceding ten years, the colored population of the United States increased 34.78 per cent, and the white only 28.82 per cent. This statement is totally incredible in view of these two facts: First, wherever in this country, as in all other civilized countries, the statistics have been collected, the colored exceeds the white death-rate; second, the white population has enjoyed the additional advantage of having been increased by nearly 2,700,000 alien immigrants; for, the American Almanac, (1881, p. 27,) reports 2,812,191 aliens settling in the United States during the ten years, 1871–1880, and among these were 119,452 Chinese. This alleged incredible increase of the colored population has been explained by the statement that in 1870, thispopulation was inadequately enumerated. Mr. Henry Gannett, a census expert, presents very strong evidence, in the May No. 1881 of the International Review, "to show indisputably that the true cause of the great discrepancy between the figures of the two last censuses [particularly for the South, and especially for the colored population], was due to the carelessness and negligence of the enumerators in 1870." However, it is well known, that in 1870 the prevalent opinion in the South was, that the population was enumerated, or reported to have been enumerated, to the disadvantage of the whites. It is certain that the colored males over 21 years of age were repeatedly registered as voters in excess of the number either enumerated in the census, or in existence. New Orleans is not likely soon to forget the facts, that while the censuses of 1870 and 1880 gave this city only 12,427 colored males over 21 years of age in the former, and only 14,004 in the latter year, and while our mortality and all other statistics confirmed the approximate accuracy of these figures, yet that the Republican officials, then in power, succeeded in the various registrations of voters, from 1868 to 1876, in *registering* from 16,000 to 23,485 colored voters!

TABLE NO. 1.

POPULATION OF NEW ORLEANS IN 1880, BY AGES IN EVERY YEAR OF LIFE, WITH SEX, NATIVITY AND RACE.

Ages in Years.	Total.	Total.		WHITES.						COLORED.	
	Males and Females.	White & color'd		Total.		Natives.		Foreign.			
		Males.	Fem'ls.	Males.	Fem'ls	Males.	Fem'ls.	Males.	Fem'ls.	Males.	Fem'ls.
Und'r 1 Yr.	5041	2511	2530	1880	1873	1875	1864	5	9	631	657
1 to 2...	3840	1891	1949	1383	1452	1377	1447	6	5	508	497
2 - 3...	5668	2872	2796	2130	2056	2109	2046	21	10	742	740
3 - 4...	5115	2582	2533	1898	1801	1890	1792	8	9	684	732
4 - 5...	5098	2561	2537	1938	1902	1921	1889	17	13	623	635
2 - 5...	15881	8015	7866	5966	5759	5920	5727	46	32	2049	2107
0 - 5...	24762	12417	12345	9229	9084	9172	9038	57	46	3188	3261
5 - 6...	4749	2337	2412	1701	1746	1691	1732	10	14	636	666
6 - 7...	4656	2307	2349	1671	1740	1651	1720	20	20	636	609
7 - 8...	5203	2599	2604	1922	1894	1901	1874	21	20	677	710
8 - 9...	5241	2565	2676	1901	1990	1870	1967	31	23	664	686
9 - 10..	5119	2501	2618	1945	1944	1920	1912	25	32	556	674
5 - 10..	24968	12309	12659	9140	9314	9033	9205	107	109	3169	3345
0 - 6...	29511	14754	14757	10930	10830	10863	10770	67	60	3824	3927
0 - 10..	49730	21726	25004	18369	18398	18205	18243	164	155	6357	6606
10 - 11..	5554	2751	2803	2078	2092	2043	2055	35	37	673	711
11 - 12..	4508	2189	2319	1707	1788	1667	1744	40	44	482	531
12 - 13..	5384	2588	2796	1906	2051	1870	1995	36	56	682	745
13 - 14..	4733	2244	2489	1764	1907	1722	1858	42	49	480	582
14 - 15..	4478	2118	2360	1624	1826	1575	1769	49	57	494	534
10 - 15..	24657	11890	12767	9079	9664	8877	9421	202	243	2811	3103
15 - 16..	4108	1896	2212	1491	1679	1423	1593	68	86	405	533
16 - 17..	4031	1725	2306	1402	1757	1361	1681	41	76	323	549
17 - 18..	3810	1672	2138	1381	1658	1306	1564	75	94	291	480
18 - 19..	4677	1912	2765	1525	2163	1461	2049	64	114	387	602
19 - 20..	4398	1903	2495	1578	1937	1494	1826	84	111	325	558
18 - 20..	9075	3815	5260	3103	4100	2955	3875	148	225	712	1160
15 - 20..	21024	9108	11916	7377	9194	7045	8713	332	481	1731	2722
10 - 20..	45681	20998	24683	16456	18858	15922	18134	534	724	4542	5825
20 - 21..	4856	1813	3043	1469	2196	1376	2047	93	149	344	847
21 - 22..	3975	1805	2170	1451	1651	1337	1541	114	110	354	519
22 - 23..	4640	1931	2709	1499	1924	1376	1738	123	186	432	785
23 - 24..	4276	1905	2371	1462	1700	1307	1509	155	191	443	671
24 - 25..	4002	1797	2205	1370	1543	1175	1374	195	169	427	662
0 - 21..	100267	47537	52730	36294	39452	35503	38424	791	1028	11243	13278
6 - 18..	56825	27155	29670	20792	22326	20309	21732	483	594	6363	7344
6 - 21..	70756	32783	37973	25364	28622	24640	27654	724	968	7419	9351
20 - 25..	21749	9251	12498	7251	9014	6571	8209	680	805	2000	3484
25 - 26..	4623	1988	2635	1391	1678	1124	1396	267	282	597	957
26 - 27..	3554	1603	1951	1211	1358	934	1119	277	239	392	693
27 - 28..	3407	1580	1827	1190	1275	927	1021	263	254	390	552
28 - 29..	3604	1636	1968	1218	1384	846	1042	372	342	418	584
29 - 30..	2758	1293	1465	970	1028	694	763	276	265	323	437
25 - 30..	17946	8100	9846	5980	6723	4525	5341	1455	1382	2120	3123
20 - 30..	39695	17351	22344	13231	15737	11096	13550	2135	2187	4120	6607
30 - 31..	5702	2547	3155	1695	1955	1077	1325	618	630	852	1200
31 - 32..	1715	816	899	667	697	411	479	256	218	149	202
32 - 33..	2888	1343	1545	1046	1135	622	706	424	429	297	410
33 - 34..	2294	1120	1174	885	847	507	488	378	359	235	327
34 - 35..	2117	1093	1024	859	749	461	443	398	306	234	275
30 - 35..	14716	6919	7797	5152	5383	3078	3441	2074	1942	1767	2414

TABLE No. 1.—*Continued*

POPULATION OF NEW ORLEANS IN 1880, BY AGES IN EVERY YEAR OF LIFE, WITH SEX, NATIVITY AND RACE.

AGES IN YEARS.	Total.	TOTAL.		WHITES.						COLORED.	
	Males and Females.	White & color'd		TOTAL.		NATIVES.		FOREIGN.			
		Males.	Feml's.	Males.	Feml's.	Males.	Feml's.	Males.	Feml's	Males.	Feml's.
35 to 36....	4529	2079	2450	1354	1492	658	785	696	707	725	958
36 - 37	2673	1239	1434	966	1025	471	513	495	512	273	409
37 - 38....	2223	1050	1173	791	862	393	427	398	435	259	311
38 - 39....	2848	1282	1566	967	1058	443	514	524	544	315	508
39 - 40....	2316	1087	1229	759	820	343	398	416	422	328	409
35 - 40....	14589	6737	7852	4837	5257	2308	2637	2529	2620	1900	2595
30 - 40....	29305	13656	15649	9989	10640	5386	6078	4603	4562	3667	5009
										1174	1371
40 - 41....	6493	3029	3464	1855	2093	730	780	1125	1313		
41 - 42....	1240	652	588	525	462	229	186	296	276	127	126
42 - 43....	2291	1115	1176	879	892	345	351	534	541	236	284
43 - 44....	1712	826	886	652	709	234	235	418	474	174	177
44 - 45....	1538	767	771	630	621	198	198	432	423	137	150
15 - 45....	103298	46504	56794	35138	40348	25263	30091	9875	10257	11366	16446
18 - 45....	91349	41211	50138	30864	35254	21173	25253	9691	10001	10347	14884
40 - 45....	13274	6389	6885	4541	4777	1736	1750	2805	3027	1848	2198
45 - 46....	4008	1916	2092	1307	1407	363	427	944	980	609	685
46 - 47....	1665	797	868	649	693	207	203	442	490	148	175
47 - 48....	1543	746	797	609	618	161	175	448	443	137	179
48 - 49....	2061	956	1105	710	794	201	224	509	570	246	311
49 - 50....	1703	813	890	597	631	176	188	421	443	216	259
45 - 50....	10980	5228	5752	3872	4143	1108	1217	2764	2926	1356	1609
40 - 50....	24254	11617	12637	8413	8920	2844	2967	5569	5953	3204	3717
50 - 51....	5064	2265	2799	1508	1704	368	467	1140	1237	757	1095
51 - 52....	818	417	401	351	334	93	91	258	243	66	67
52 - 53....	1569	744	825	611	635	172	169	439	466	133	190
53 - 54....	1207	581	626	471	511	106	143	365	368	110	115
54 - 55	1197	588	609	490	479	127	134	363	345	98	130
55 - 56....	1911	896	1015	641	665	177	159	464	506	255	350
56 - 57...	1170	572	598	464	453	118	111	346	342	108	145
57 - 58....	778	382	396	305	323	68	92	337	231	77	73
58 - 59....	998	474	524	394	390	111	133	283	257	80	134
59 - 60....	806	401	405	304	285	84	76	220	209	97	120
20 - 60....	108772	49944	58828	37172	41076	20750	24170	16422	16906	12772	17752
50 - 60....	15518	7320	8198	5539	5779	1424	1575	4115	4204	1781	2419
60 - 61....	2974	1360	1614	873	927	225	277	648	650	487	687
61 - 62....	460	247	213	210	180	55	45	155	135	37	33
62 - 63....	696	354	342	267	269	78	98	209	171	67	73
63 - 64....	654	299	355	254	278	75	90	179	188	45	77
64 - 65....	589	279	310	226	246	64	74	162	172	53	64
65 - 66....	1165	533	632	356	424	97	134	259	290	177	208
66 - 67....	474	230	244	192	183	47	60	145	123	38	61
67 - 68....	431	198	233	155	176	51	50	104	126	43	57
68 - 69....	473	218	255	162	183	45	68	117	115	56	72
69 - 70....	340	146	194	112	126	29	39	83	87	34	68
60 - 70....	8256	3864	4392	2827	2992	766	935	2061	2057	1037	1400
70 - 71....	1020	375	645	218	348	53	105	165	243	157	297
71 - 72....	187	71	116	62	94	22	36	40	58	9	22
72 - 73....	283	118	165	87	126	33	42	54	84	31	39
73 - 74...	203	83	120	58	87	19	32	39	55	25	33
74 - 75....	192	89	103	66	82	15	27	51	55	23	21
75 - 76....	429	164	265	94	143	21	46	73	97	70	122
76 - 77....	185	62	123	48	93	13	30	35	63	14	30
77 - 78....	107	37	70	31	53	9	14	22	39	6	17
78 - 79....	150	60	90	40	62	10	21	30	41	20	28
79 - 80....	90	42	48	27	31	7	12	20	19	15	17
70 - 80....	2846	1101	1745	731	1119	202	365	529	754	370	626

TABLE No. 1—*Continued.*

POPULATION OF NEW ORLEANS IN 1880, BY AGES IN EVERY YEAR OF LIFE, WITH SEX, NATIVITY AND RACE.

Ages in Years	Total	Total.		WHITES.						COLORED.	
	Males and Females.	White & color'd		Total.		Natives.		Foreign.			
		Males	Fem'ls	Males.	Fem'ls.	Males.	Feml's.	Males.	Fem'ls.	Males.	Fem'ls.
80 to 81..	311	120	191	55	79	12	20	43	59	65	112
81 - 82..	47	21	26	12	24	3	6	9	18	9	2
82 - 83..	55	17	38	14	22	7	9	7	13	3	16
83 - 84..	53	26	27	16	17	6	5	10	12	10	10
84 - 85..	40	13	27	8	22	2	10	6	12	5	5
85 - 86..	67	19	48	7	28	2	6	5	22	12	20
86 - 87..	27	10	17	6	15	1	6	5	9	4	2
87 - 88..	25	7	18	4	8	4	5	0	3	3	10
88 - 89..	15	9	6	2	3	1	0	1	3	7	3
89 - 90..	23	8	15	3	11	0	5	3	6	5	4
80 - 90..	663	250	413	127	229	38	72	89	157	123	184
90 - 91..	64	17	47	6	7	2	3	4	4	11	40
91 - 92..	7	3	4	1	2	.....	1	1	1	2	2
92 - 93..	9	3	6	1	4	.....	1	1	3	2	2
93 - 94..	9	2	7	0	1	.....	.....	.....	1	2	6
94 - 95..	1	1	.....	1	.....	.....	.....	1	.....	.....	.....
95 - 96..	18	8	10	1	1	.....	.....	1	1	7	9
96 - 97..	9	3	6	.....	4	.....	1	.....	3	3	2
97 - 98..	5	1	4	.....	3	.....	1	.....	2	1	1
98 - 99..	12	5	7	.....	2	.....	.....	.....	2	5	5
99 - 100..	3	.....	3	.....	.....	.....	.....	.....	.....	.....	3
90 - 100..	137	43	94	10	24	2	7	8	17	33	70
100 - 101..	32	6	26	.....	4	.....	2	.....	2	6	22
101 - 102..	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
102 - 103..	3	1	2	.....	.....	.....	.....	.....	.....	1	2
103 - 104..	2	1	1	1	1	.....	.....	1	1	.....	.....
104 - 105..	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1
105 - 106..	3	1	2	.....	.....	.....	.....	.....	.....	1	2
106 - 107..	4	1	3	.....	.....	.....	.....	.....	.....	1	3
107 - 108..	2	.....	2	.....	.....	.....	.....	.....	.....	.....	2
108 - 109..	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1
109 - 110..	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1
100 - 110..	49	10	39	1	5	.....	2	1	3	9	34
110..	6	4	2	.....	.....	.....	.....	.....	.....	4	2
115..	1	.....	1	.....	1	.....	.....	.....	1	.....	.....
125..	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1
130..	1	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Over 110..	9	4	5	.....	1	.....	.....	.....	1	4	4
" 100..	58	14	44	1	6	.....	2	1	4	13	38
" 90..	195	57	138	11	30	2	9	9	21	46	108
" 60..	11960	5272	6688	3696	4370	1008	1381	2688	2989	1576	2318
" 45..	38458	17820	20638	13107	14292	3540	4173	9567	10119	4713	6346
" 21..	115876	53403	62473	39399	43250	20382	23504	19017	19746	14004	19223
Totals...	216143	100940	115203	75693	82702	55885	61928	19808	20774	25247	32501

Totals... Whites 158,395, Native Whites 117,813, Foreign Whites 40,582, Colored 57,748

TABLE No. 2.

CHANGES IN THE POPULATION OF NEW ORLEANS IN 1860, 1870, 1880.

	Total.	Total.	WHITES.						Colored.	
	Males and Females.	White & color'd	Total.		Natives.		Foreign.			
		Males | Fem'ls.	Males.	Fem'.s.	Males	Fem'ls.	Males.	Fem'ls.	Males	Fem'ls.
A—Changes in the Total Population.										
1860*.....	174491	88325 | 86166	77733	71330	42236	40830	35497	30500	10592	14836
1870.....	191418	90279 | 101139	68630	72293	44498	48571	24132	23722	21649	28846
1880.....	216143	100940 | 115203	75693	82702	55885	61928	19808	20774	25247	32501
B—Changes in the Most Vigorous and Productive Population *i. e.*, the Population From 20 to 50 Years of age, in 1860, 1870, 1880.										
1860*.....	88236	46550 | 41686	41607	34163	[17329	13255	24278	20908]	4943	7523
1870.....	85111	39385 | 45726	29484	31585	11739	13896	17745	17692	9901	14141
1880.....	93254	42624 | 50630	31633	35297	19326	22495	12307	12802	10991	15333

* The population in 1860 of the city of New Orleans was only 168,675, but for Orleans Parish, that is New Orleans and Algiers, it was 174,491, and, for this population only, were the specfications cited in the table stated.

[ ]The four specifications in brackets are not given in the census, but are careful estimates therefrom.

TABLE No. 3.

POPULATION, DEATHS, AND DEATH-RATES PER 1000 POPULATION, BY SEX AND RACE, IN NEW ORLEANS IN 1880.

	Population.	Deaths.	Death-Rates.
White males	75,693	2050	27.1
White females	82,702	1587	19.2
Total whites	158,395	3637	22.9
Colored males	25,247	1003	39.7
Colored females	32,501	983	30.2
Total colored	57,748	1986	34.4
Total males	100,940	3053	30.2
Total females	115,203	2570	22.3
Total males and females	216,143	5623	26.0

TABLE No. 4.

POPULATION, DEATHS AND DEATH-RATES PER 1000 POPULATION, BY AGE AND RACE, IN NEW ORLEANS IN 1880.

AGES.	U. S. CENSUS, 1880. POPULATION.			ANNUAL REPORT LA. STATE B'D HEALTH. DEATHS.			DEATH-RATES.		
	White	Col'red	Total.	White	Col'red	Total.	White	Col'red	Total.
Under 1 yr	3.753	1.288	5,041	774	473	1247	206.2	367.2	247.3
1 to 2..	2,835	1,005	3,840	240	133	373	84.6	132 3	97.1
2 - 5..	11,725	4,156	15,881	244	144	388	20.9	34.6	24.4
5 - 10..	18,454	6,514	24,968	142	69	211	7.7	10.5	8.5
10 - 15..	18,743	5,914	24,657	64	51	115	3.4	8.6	4.6
15 - 20..	16,571	4,453	21,024	82	47	129	4 9	10.5	6·1
20 - 25..	16,265	5,484	21,749	176	105	281	10.8	19.1	12.9
25 - 30..	12,703	5,243	17,946	159	108	267	12.5	20.6	14.9
0 - 10..	36,767	12.963	49,730	1400	819	2219	38.0	63.2	44·6
10 - 20..	35.314	10,367	45,681	146	98	244	4.1	9.4	5.3
20 - 30..	28,968	10,727	39,695	335	213	548	11.5	19.8	13.8
30 - 40..	20,629	8,676	29,305	373	207	580	18.1	23.8	19.8
40 - 50..	17,333	6,921	24.254	430	171	601	24.8	24.7	24.8
50 - 60..	11,318	4,200	15,518	391	143	534	34.5	34.0	34.4
60 - 70..	5,819	2,437	8,256	305	144	449	52.4	59 1	53.7
70 - 80..	1,850	996	2,846	153	81	234	82 7	81.3	82.2
80 - 90..	356	307	663	69	62	131	193 8	201.9	197.5
Over 90..	41	154	195	21	42	63	512.2	272.7	323.1
Unknown.	0	0	0	14	6	20	.....	.....	.....
Totals..	158.395	57.748	216,143	3637	1986	5623	22.9	34.4	26 0

[ERRATA—Page 1035, Total pupils enrolled in the Public Schools 25,388, instead of 25,348; colored 6,463, instead of 6,413.]

CURRENT MEDICAL LITERATURE.

RESECTION OF THE STOMACH FOR A CANCEROUS TUMOR.

The following communication is of considerable scientific interest, showing to what extent surgery may be carried successfully:

On the 29th day of January, this year, Dr. Billroth, of Vienna, undertook the resection of the stomach on a woman 43 years of age, who showed symptoms of cancer of this organ for several weeks; she suffered from continued vomiting and

hematemesis, and in the region of pylorus was felt a voluminous tumor, which was movable; it was this mobility of the tumor that made the operation appear possible; this was performed with the intention to make merely an exploratory incision in case an extirpation should be considered impossible.

Dr. Billroth performed the operation in the following way: An incision was made through the abdominal wall parallel to the false ribs on the right side directly over the tumor. When the incision through the integuments and peritoneum was made the tumor presented itself covered by epiploon and adhering to the transverse colon; the operator isolated it from these parts and could now verify that he had to do with a large carcinoma occupying pylorus and part of the stomach; he would, however, not abandon the operation and close up the abdominal incision; he preferred to extirpate the tumor, or rather to resect a part of the stomach, as it was necessary, in order to isolate the tumor, to make an incision in the stomach towards the midst of the small curvature and below pylorus in the healthy part of duodenum.

Dr. B. was much astonished to see how easy it was to unite the gastric wound with the duodenal wound by sutures, which, previously had been applied above and below the tumor; and it was noticed that the retraction of the portion that was left of the stomach, was immediate and sufficient to allow the adaptation of the surface of the gastral section with that of the duodenum; so, that when the operation was over, there remained a stomach of a considerably diminished size, but a permeable one; the abdomen was closed by sutures and an antiseptic dressing applied without drainage-tube.

On the second day after the operation the patient took some nourishment by the mouth, and on the eighth day the sutures of the abdominal wall were taken away; but it cannot be ascertained whether the visceral sutures have been extracted at the same time, or have remained encysted, or have dropped into the new-formed stomach. However it be, fifteen days after the operation, the patient was alive yet, proving the possibility of resecting successfully a part of the stomach.

It remains yet to see how far the cure will prove to be definitive, to see how long a time the patient will remain well; in other words, to determine which is the actual benefit to her of an operation, which may equally interest the surgeons and the physiologists, who have, however, not the occasion to make experiences, where the responsibility of the greater is so greatly involved.—(*Journal de Médecine et de Chirurgie* March, 1881.)

Editorial Department.

We regret that we are not able to lay before our readers a full report of the proceedings of the Sanitary Council of the Mississippi Valley. The meeting was looked to as one of vital interest and importance, and if we judge of its results from the tenor of its progress as far as has been reported, all expectations of calm and judicious conclusions have been realized.

The President's address is characteristic of Dr. Kedzie, practical, straightforward and incisive. We regret that we have not the space to enable us to publish liberal extracts from this address. We are, however, constrained to make room for the following:

Neither the National Board of Health nor the Sanitary Council has sought to change, modify or interfere in any way with the public health administration of Louisiana. All we have asked is the facilities and opportunities for full, exact and reliable information on these subjects sent to the proper health officers and organization. We have no onslaught, open or covert, upon the rights and privileges of that State. We have only asked that we may have trustworthy and prompt information upon subjects where Louisiana may threaten us by her acts or neglects. We have asked as a favor what we might have demanded as a right, but the State Board of Health of Louisiana has persistently and contemptuously refused our prayer, though in so doing it has resisted the public sentiment of the intelligent public. That Board shows a disposition to dictate terms to the other States that line the Mississippi, and by reason of her geographical position to control the Sanitary administration of the valley. In attempting to carry out any such programme, that Board will encounter serious obstacles. The Boards of Health in the other States of the valley are as intelligent on questions of public health, and are as zealous in guarding the safety of their people as the Louisiana Board. If the brunt of this strife fell upon the Louisiana Board we could view the strife with perfect equanimity. But in this encounter other and innocent parties will have to bear the blows. Commercial intercourse between New Orleans

and the States of the Valley is a matter for New Orleans to determine for herself; but with trade or without trade we demand, first of all, the safety of our people from foreign pestilence. We have been deceived in times past, but will be trifled with no longer; for the future we demand a sentinel at the point of danger whom we can trust, or the highways of commerce will be closed at the first breath of danger.

Those who have asserted so persistently and for so long a time, that the National Board of Health was seeking to deprive local boards of their powers, or their freedom of action, when employed for promotion of public health, should read the above and suffer their erroneous impressions to be removed. In the presence of local boards the National Board can do nothing to absorb them, or usurp their duties. Even if it were possible to do so, we can not understand how by such a course of conduct, it would be in any manner benefited.

Its constituting act narrows its ambition and energies to the one laudable purpose of co-operating with and aiding local boards in limiting pestilence so that human lives may be saved, and also in guaranteeing safety in commercial pursuits. It cannot supplant local boards except through grant of new powers provided for the most extraordinary emergencies. It cannot, even if such were its disposition, engage in those unfriendly, unprofitable and most unseemly disputes, which some health officials may have endeavored to force upon it.

This interpretation of the position of the National Board, is based both upon the nature and requirements of its constituting act, and upon a knowledge of its past record. It must occur then that when somebody writes or speaks of a "quarrel" existing between the National Board and some other board, that the quarrel is altogether confined to that party which is not restricted by vigorous enactments.

The council elected Dr. J. J. Speed, of Kentucky, President, and Dr. Wirt Johnston, of Mississippi, Vice President. The telegraphic report of election of officers, did not mention that Dr. Rauch, of Illinois, is still to hold the office of secretary, but we suppose this to be the case. The selection of such men as the above to fill its principal offices, insures the perpetuity and future usefulness of the organization.

Meteorological Summary—March.
Station—New Orleans.

Date.	Daily Mean Barometer.	Daily Mean Temp'ture.	Daily Mean Humidity.	Prevailing Direction of Wind.	Daily Rain-fall.
1	30.175	58.7	58.7	South	....
2	29.957	65.0	72 0	South	.....
3	30.032	59.5	53.7	N. W.	01
4	29.950	58.2	39.3	West.	.....
5	30.013	55 0	29.7	West.	.....
6	30.092	54.0	55.7	East.	.....
7	30.022	57.2	91.7	S. E.	1.31
8	30.046	56.5	60.0	N. W.	.....
9	30.076	58 2	52.3	N. W	.....
10	29.983	58.7	65.0	S. E.	.....
11	29.693	65.2	88.3	East.	39
12	29.805	63.5	54.0	N. W.	.....
13	30.009	61.2	57 3	N. E.	.....
14	30.012	62.5	57.7	East.	12
15	29.977	64.0	94.3	East.	23
16	29.911	72.5	87.3	South	06
17	29.914	65 7	94.3	S. E.	31
18	29.681	69.2	88.0	S. E.	20
19	29.899	58 5	50.7	West.	09
20	30.007	55.5	39.3	North	.....
21	29.979	56.5	46.3	S. W.	01
22	30.106	52.0	41.7	N. W.	.....
23	30.147	56.0	48.7	S. W.	.....
24	30.129	63.2	50.7	S. W.	.....
25	30.078	65.0	76.3	South	.....
26	30.146	60.7	56.7	N. W.	.....
27	30.171	55.5	46.3	N. E.	.....
28	29.974	60.2	63.7	South	.....
29	29.971	56.2	63.3	N. W.	02
30	30 024	55.5	41.7	N. W.	.....
31	30.044	57.0	33.7	N. W.	.....
Sums	....	....	....	.....	total
Means	30.001	59.9	59.9	N. W.	2.75

General Items.

Highest Barometer, 27th, 30.249.
Lowest Barometer, 11th, 29.612.
Monhly Range of Barometer, 637.
Highest Temperature, 77° on 16th.
Lowest Temperature, 42° on 22d.
Monthly Range, 35°.
Prevailing Direction of Wind, N. W.
Greatest Velocity of Wind and Direction, North West, 30 miles on 29th.
Total No. of miles 7,172.
Number of Clear Days, 14.
Number of Fair Days, 8.
Number of Cloudy days 9.
No. of days on which rain fell, 11.

COMPARATIVE TEMPERATURE.

1871.....		1876.....	59°.9
1872.....		1877.....	60°.7
1873 .....60°.4		1878.....	66°.4
1874.....66°.2		1879.....	64°.7
1875..... 63°.5		1880.....	65°.7

COMPARATIVE PRECIPITATIONS.

1871.....inches.		1876; 11.32	inches
1872..... "		1877; 4.94	"
1873; 5.10 "		1878; 4.63	"
1874; 7.57 "		1879; 1.36	"
1875.10.84 "		1880; 6.66	"

L. DUNNE,
Sergeant Signal Service U. S. A.

Mortality in New Orleans from March 19th, 1881, to April 16th, 1881, inclusive.

Week Ending.	Yellow Fever.	Malarial Fever.	Consumption.	Small-pox.	Pneumonia.	Total Mortality.
March 26	0	8	34	0	9	147
April 2	0	9	17	0	12	109
April 9	0	2	28	0	13	131
April 16	0	5	15	0	6	113
Total....	0	24	94	0	42	500

PROCEEDINGS

— OF THE —

LOUISIANA STATE MEDICAL SOCIETY.

FOURTH ANNUAL MEETING.

First Day, March 30th, 1881.

The Society met at 12, M., in the University of Louisiana, the President, Dr. C. M. Smith, in the chair, and twenty-five members present.

Dr. C. J. Bickham, chairman of committee on Reports and Essays, made his report. Seven papers, of which the subjects were given, were announced; besides such voluntary papers as might be presented during the session.

Dr. S. E. Chaillé, chairman of the committee on State Medicine, stated that he was ready to report, but requested the postponement of its reading until the next day's session. The request was granted by the Society.

Dr. S. M. Bemiss read an abstract of a paper on "Consumption in Louisiana, in 1880."

The doctor stated that, owing to want of time, he had been prevented from preparing as complete a report as he desired, and requested to be allowed a longer time for its completion.

On motion of Dr. A. A. Lyon, Dr. Bemiss was requested to further pursue his investigations and report at the next annual meeting.

Dr. G. K. Pratt, treasurer, made his report which was accepted.

On motion of Dr. T. G. Richardson, the treasurer was authorized to pay the expenses incurred by Dr. Bemiss in pursuing his investigations.

The chairman of the committee on publication, Dr. S. S. Herrick, made his report, which was received.

Dr. S. S. Herrick, corresponding secretary, made his report. The total number of physicians reported in the State is 798, of which 642 are regular, 65 doubtful or unknown and 92 irregular. Sixteen physicians died during the year 1880. Eleven parishes were not heard from.

The resignation of Dr. C. P. Wilkinson was read and accepted.

Election of members being in order, the following were elected by acclamation:

Drs. Hartwell Allison, D. H. Billiu, of Caddo; J. S. Ford, M. R. Richard, Paul von Seydewitz, G. B. Underhill, of Orleans; F. Guilbeau, of St. Landry.

On motion, the Society adjourned until 7:30, P. M.

EVENING SESSION.

The meeting was called to order at 8, P. M., the President, Dr. C. M. Smith, in the chair.

Election of officers being in order, the following were elected for the ensuing year:

President—Dr. A. A. Lyon, of Caddo.

Vice Presidents—Dr. D. R. Fox, of Plaquemines.

Dr. J. P. Davidson, of Orleans.

Dr. A. B. Snell, of Iberville.

Dr. R. H. Day, of East Baton Rouge.

Dr. W. W. Ashton, of Caddo.

Dr. J. D. Hammond, of Morehouse.

Dr. L. F. Salomon was re-elected Recording Secretary.

Dr. S. S. Herrick was re-elected Corresponding Secretary.

Dr. Geo. K. Pratt was re elected Treasurer.

On motion of Dr. S. E. Chaillé, the next annual meeting was fixed to take place in New Orleans on the last Wednesday in March, 1882.

Mr. Edward Fenner, of New Orleans, was elected an honorary member and Annual Orator for 1882.

Voluntary papers being in order, Dr. R. H. Day read a paper on The Treatment of Yellow Fever. Referred to the Publishing Committee.

Adjourned to Thursday, March 31st, at 12, M.

SECOND DAY, THURSDAY, MARCH, 31st.

The meeting was called to order at 12:30, the President, Dr. C. M. Smith, in the chair and eighteen members present.

The minutes of the first day's proceedings were read and approved.

Dr. S. E. Chaillé, chairman of Committee on State Medicine, proceeded to read his report.

Sec. 1. The first portion, containing draft of a bill regulating the practice of medicine in the State, was read. After much discussion as to the propriety of making the Medical Department of the University of Louisiana the power to examine diplomas, this portion was adopted, Dr. T. G. Richardson and two other members voting in the negative.

That portion of the report relating to protecting confidential communications made to physicians was adopted.

Sec. 2. Portion referring to the State Board of Health, containing three amendments to the present laws, as follows, was adopted:

1st. Relative to selection of city members.

2d. Relative to selection of the resident physician at Mississippi quarantine station.

3d. Relative to quarantine fees.

Recommendations for and the text of an act to provide for the organization of a State Board of Health and local boards, was adopted.

Sec. 3. An act in regard to the sale of adulterated food and drugs and fœticidal drugs and medicines. Adopted.

Resolutions in regard to education in physiology and hygiene. Adopted.

Relative to trial of persons accused of crime alleged to be insane. Adopted.

Relative to coroners and their duties. Adopted.

Relative to compensation of medical experts. Adopted.

Relative to medical expert testimony. Adopted.

Relative to public institutions for the sick and infirm Adopted.

On motion, duly seconded, the report was adopted as a whole.

On motion, the thanks of the society were voted the committee for the elaborate report.

Dr. T. G. Richardson moved that the committee on State Medicine be authorized to take such measures as may be necessary to carry into effect the suggestions embodied in the report, with power to draw upon the treasurer for whatever funds may be required. Carried.

On motion of Dr. S. E. Chaillé, Drs. Dupree, Day and Langworthy were appointed a committee, known as the Legislative Committee, for the purpose of presenting before the legislature the laws recommended.

Adjourned to 7:30, P. M.

Evening Session.

The society met in Grunewald Hall, the President, Dr. C. M. Smith, in the chair.

The President read his annual address, after which the Annual Orator, Hon. Thos. J. Semmes, addessed the society.

On motion, the thanks of the society were voted the President and Hon. Thos. J Semmes for their entertaining addresses. Adjourned to Friday at noon.

Third Day, Friday, April 1st.

The meeting was called to order at 12, M., Dr. A. A. Lyon in the chair.

Minutes of second day's proceedings read and adopted after being corrected.

Dr. M. Schuppert read a paper on "Medical and Surgical Aphorisms." Referred to Publishing Committee.

Dr. S. M. Bemiss read a paper on "The Diagnosis of Yellow Fever for Sanitary Purposes."

Dr. S. Logan moved that the schedule of symptoms as read by Dr. Bemiss be approved by this Society. Carried.

D. E. S. Lewis read the report of a "Case of Retained Menses." Referred to Publishing Committee.

Dr. Bemiss exhibited an instrument invented by Dr. Gadbury of Mississippi, for forcing air into the lungs.

Dr. G. A. B. Hays offered the following resolution, which was adopted.

Whereas, The attendance upon the present meeting of the Louisiana State Medical Society is much smaller than it should be, when we consider the number of members enrolled—

Resolved, That the Recording Secretary be instructed to issue notifications to all members individually of the time and place of each annual meeting of the Society; said notifications to be mailed at least one month and not more than six weeks prior to the date of such meeting.

On motion the resolution was incorporated in the by-laws.

Dr. Gazzo called the attention of the Society to the different trees and shrubs growing in Louisiana, which might be utilized for medical purposes.

The following resolution by Dr. S. S. Herrick was adopted:

Resolved, That the Committee on Organization be requested to prepare and send throughout the State an address to medical men, urging upon them the importance to themselves and the advantages to the public of uniting themselves into local medical societies, and of sustaining the same with all diligence.

Dr. A. A. Lyon presented and read a paper by Dr. J. Egan, on "Urinary Calculus in North Louisiana." Referred to Publishing Committee.

Dr. S. E. Chaillé moved that the by-laws be amended, so as to make nine members constitute a quorum, instead of fifteen. Amended by Dr. A. A. Lyon to twelve. Adopted as amended.

Dr. A. A. Lyon moved that the Committee on Publication be instructed and authorized to make arrangements for publishing the transactions in the NEW ORLEANS MEDICAL AND SURGICAL JOURNAL, if the expense incurred will be less than by publishing a volume.

The President elect, Dr. A. A. Lyon, announced the following as the standing committees:

Committee on Organization, Etc.—Drs. A. A. Lyon, D. R, Fox, J. P. Davidson, A. B. Snell, R. H. Day, W. W. Ashton, J. D. Hammond.

Judiciary.—Drs. C. M. Smith, T. G. Richardson, E. S. Lewis.

Reports and Essays—Drs. S. Logan, A. B. Miles, F. W. Parham, J. Gazzo, W. Hilliard.

On State Medicine and Legislation.—Drs. S. E. Chaillé, J. P. Davidson, T. J. Allen, S. S. Herrick, G. A. B. Hayes, P. B. McCutchon, J. W. Dupree, F. W. Parham.

Publication.—Drs. S. S. Herrick, L. F. Salomon, Geo. K. Pratt.

Necrology.—The Vice President.

The following were elected delegates to the American Medical Association: Drs. Samuel Logan, J. C. Egan, J. B. Wilkinson, O. P. Langworthy, A. C. Love.

On motion the Society adjourned to meet in New Orleans, the last Wednesday in March, 1882.

L. F. SALOMON,
Recording Sec'y.

ADDRESS OF THE PRESIDENT,

DR. C. M. SMITH.

Gentlemen of the Medical Association of the State of Louisiana:

It gives me great pleasure to greet this assemblage of the representatives of the medical profession hailing from every section of our State; and, while I am profoundly grateful for the distinguished honor conferred upon me as your presiding officer, yet this gratification would be greatly enhanced if I could feel that I possessed to a greater extent the qualifications requisite for a proper discharge of its duties. But whatever may be my shortcomings in other respects, I yield to none in the profession in a sincere and ardent devotion to its welfare and interests; nor will any be found within the medical fraternity who will go further than myself to preserve its exalting standard, and if possible, to elevate it still higher in the path of science and honor.

Although this age stands pre-eminent for its wonderful discoveries in science, yet I think I hazard nothing in asserting that the science of medicine is behind none in its rapid strides towards a practical remedial development. Released after a fight of centuries from the grasp of superstition, empiricism and charlatanry, it has swept in its emancipation many false theories away, which a too great reverence for mere precedent had tolerated; and, establishing as the corner stone of its modern temple of investigation the inductive method, is marching on to greater triumphs in the direction of preventive, as well as curative truth. Under the lead of this fact-developing guide, many diseases hitherto locked in the embraces of ambiguity have been elucidated, and indeed the science, as an entirety, under searching and educated skill, is fast being rescued from the realm of obscurity and assuming a well earned peership among its fellows in the temple of knowledge The domain of empiricism and charlatanry is being confined to the ignorant and credulous, and their empire must crumble rapidly under the destroying hand of popular education and scientific research.

The microscope and laboratory, under the searching skill of the modern scientist, recognize no perpetual "terra incognita" in the realm of physics, and nothing within the range of earth, air and water, including physiology in its broadest sense, is considered beyond the reach of their penetrating ex-

plorations. The air we breathe is forced to reveal the different races of animalcules and germs which hold sway in the vast domain of atmospheric economy, as they sport and flourish innocuously beneath the rays of the noon-tide sun, or lurk in the dark places and miasmatic haunts, to sally forth in times of abnormal disturbance to infest with pestilence and plague. The crystal stream, the stagnant pool, the falling rain, the lakes, the rivers, and even the great deep itself, can have no secrets under the penetrating light of modern investigation, but are forced to submit to the registration of their microscopic population in that never-sealed book of humanity, in which the finger of science is ever recording the enemies to her health and life. May not this sleepless vigilance of medical science be able to guarantee to generations in the not far-distant future the enjoyment of the maximum limit of average life as prescribed by Deity, the exceptions being only the curse of enfeebled inheritance, and the persistent violation of the laws of health—instead of, as now in its helplessness, beholding the human race sinking into untimely graves.

Besides the never-ceasing extension of the dominion of pathology, by which diagnosis is simplified, and the term occult banished from the vocabulary of many diseases hitherto ambiguous and obscure, exploration is enriching the materia medica with its wonderful and valuable discoveries in the field of remedies, and thus Therapeutics is keeping place with her industrious and co-ordinate compeers in their ambitious and laudable efforts to extend the domain of pathology. While science has effectually dug the grave of Empiricism, there still remains a school of respectable and learned medical thinkers, the founder of which has only recently passed away, that differs diametrically from our profession as to the modus operandi of curative action as well as to the mode of administering curative agents. It is scarcely probable that two such opposing forces as Allopathy and Homœopathy will be able to hold empire within the same domain, if intelligence and culture, and therefore sicence must, and doubtless will determine whether "Similia Similibus Curantur" is a divine inspiration for the healing of the nations, or whether the time-honored opposing principle of Allopathy is the corner stone of nature's curative economy; whether the infinitisimal dilutions of Hahemann are to establish in medical practice the paradox, *the weaker you are, the stronger you become*, or whether the long and experimentally established formulas of Allopathy are to vindicate the common sense axiomatic principle, *that particular force cannot be successfully met with inferior, but must be overcome by superior power*; whether the frequent practice of calling upon Allopathy to reinforce Homœopathy in times of emergency and peril is evidence of the fallacy of the latter or proof of the imperfection of both. The solution of these problems will doubtless be to establish more firmly than ever that school of medi-

cine which, honored by age and success, has been guided in its researches by a cautious, patient, conservative and conscientious spirit of investigation, and can number among its teachers and disciples some of the greatest discoverers and benefactors of the human race, who, in the development of curative truth and remedial agents, have defied disease, and driven it in its most malignant and loathsome forms from the homes of humanity and our advancing civilization, besides being able at the same time to point to the millions, young and old, who, under its curative power, are daily relieved from pain and diseases, and even delivered from the jaws of death through its skillful and beneficent treatment.

To my mind, medical science is doing no greater work than she is accomplishing in the direction of sanitation, and in this field are her greatest victories to be won. The trite maxim "an ounce of prevention is worth a pound of cure" is a "wise saw" and, adequately appreciated, will lessen immeasurably the miseries and sorrows of mankind. I would like to see this association take earnest and decided ground in reference to sanitation, included in and inseparable from which is quarantine.

It is appaling to reflect how many of the human race, not only among the lowly, but in the educated and cultured sphere of life, have fallen into premature graves through ignorance of the simple laws of health. It is not less astonishing that the medical faculty, with all its learning and philanthropy, should have failed until now to arouse itself and the country at large to a proper realization of the vital importance of hygiene. This feeling is intensified, when it is observed how wantonly sanitation is ignored, and even abused, in spite of the knowledge of its value, by communities that have been afflicted with and decimated by epidemic pestilence.

But for the terrifying yellow fever scourge of 1878, creating consternation far and wide, it is doubtful whether the people of the United States would now be awakened to a conception of their short-comings, and their neglect of matters vital, not only to their comfort, but their health and very existence. It looks as though Providence, to arouse a people to a proper sense of their responsibilities, must make them wade through a sea of trial and affliction.

But, although more palpable in its expression, yet it is not in epidemic form that human life has most suffered. The low, wasting forms of fever which may, from want of sanitation, develop themselves in any locality, but which are especially observable in densely populated sections of cities, where abnormal conditions are most liable to exist, from overcrowding and other neglect of hygiene, it is here, and where the vaults and cesspools of the rich exhale their deadly effluvia, that the subtle poison is generated, which, infusing itself into the blood and tissues of the human body, sends imperceptibly so many thousands, and even millions, to premature death,

and this, too, with no conception of the fact that the grim monster had claimed his prey before the time.

Miasmatic fevers we also know too often to exist in the most salubrious localities in the country, and in towns and villages where stagnant pools and animal and vegetable decay are permitted, through neglect, to breathe their putrefaction and noxious exhalations. If it be true—and it will not be denied—that the whole class of epidemic diseases can be banished by cleanliness and isolation, it follows logically that they can be prevented by proper sanitation. If the great plagues of the world could be stayed by isolation or quarantine, they could have been controlled by sanitation, for quarantine is only one of the executive officers of sanitary science. Only a short time since Russia, with a keen recollection of her pestilential scourging, stopped the invasion of "black death" from her Asiatic neighbors by placing a cordon of soldiers between that destroyer and her Empire. If the facts were known, doubtless the plagues of Ethiopia, Egypt and Athens in the ante-christain epoch, and of Central Asia, Persia, Syria, Russia, Italy, and of the cities of London and Constantinople in modern times, would never have darkened the pages of history with its frightful gloom, if sanitary science had at that time been appreciated by mankind, and the seventy-five millions of human beings that in medieval times fell a prey to this insatiate monster, would have lived to enjoy the average existence of humanity vouchsafed by Deity.

Most of the malignant epidemics originate from the same source, uncleanliness and filth—as the plague and the kindred maladies, Asiatic cholera, yellow fever, diphtheria, small-pox, typhus, and typhoid fevers, malignant dysentery and others that might be enumerated, belong to the same class, and may be prevented by sanitation. Allow me in this connection to quote the following, from the pen of an accomplished health officer of this country, which puts this class of maladies in their proper light, with a descriptive power, which, while true, loses nothing of its force because clothed in beautiful diction: "Typhus is nearest of kin to plague. While it persists in the midst of poverty, filth and overcrowding on the other side of the ocean, it has fortunately never prevailed to any great extent in our American centers of population. Typhoid is a member of the same family, and is too well known in all lands. Malignant cholera is a "tramp" from the same household, but has fortunately been greatly restricted in its wanderings by a more intelligent quarantine and by increased cleanliness. Yellow fever is first cousin to plague, and will continue to desolate portions of this country, till our Southern cities practice sanitation better, and the federal government undertakes the duty of preventing its periodical importation. Diphtheria, like plague, feeds on filth and is propagated by infection. Scarlatina is the more fervid, but not less malignant sister of diph

theria. Both knock at our doors with murderous hands, and will not leave till sanitary administration is allowed to enforce with more rigor the isolation and cleanliness taught by advancing sanitary science. Small-pox is the "Wandering Jew" of the epidemic family, but human ingenuity has tamed its destructive spirit with the cunning of vaccination. Here, again, cleanliness and isolation can do the rest."

Should we not, then, in view of all the facts and arguments that belong to this subject, endeavor to raise sanitation to her true position. It is the great overshadowing element in the science of medicine, and deserves to occupy the chief place in the Pantheon of useful knowledge.

I do not mean to suggest that either science or human skill will be able to create an utopia for this sin-stricken world, and by sanitation or any other expectant, relieve mankind of the inevitable doom which natural decay, and numberless inscrutable visitations of Providence will inflict, for in spite of the utmost sanitary precautions and most cautious circumspection, disease and death will come when least expected. They may come in the storm or in the whirlwind, or may approach with the gentle zephyr. They may come to him in robust as well as to him in feeble health, and often when the air seems to exhale its invigorating elixir of health from every atom, does the dread sovereign of the body lay his hand upon this one and that one of a community in the flush of health, and summon them to the tomb. Unfortunately for the human race, the most rigid sanitation will yet leave our profession a vast field to till in ailments which are inseparable from the law of our being. I merely mean to assert that it is our duty to endeavor to reduce the death rate of humanity to the minimum limit prescribed by the Almighty.

In educating our fellow-men up to an intelligent and practical perception of their responsibilities in this matter, we will have much to learn ourselves, for sanitation has only within the life time of many of us risen to the dignity of a science. But it is clear to be seen that sanitation will enter into many departments of domestic and municipal economy, which heretofore have neither been the objects of personal observation, nor subjects of legal restraint, but which, for personal and public safety, will be forced to yield in due time to social control. Doubtless New Orleans owes her immunity from disease and her exceptional healthfulness during the past year to her wise and thorough sanitation—for instance in observing the laws of ventilation, in cleansing her alleys, lanes and yards; in removing defilement of every kind; in flushing her streets regularly with water and the application, whenever needed, of cleansing and purifying chemical agents. The State Board of Health and the Citizens' Sanitary Association of New Orleans are entitled to the credit of this achievement, and in gaining it, have not only earned the gratitude of their fellow citizens, but

have added another argument in favor of sanitation as the great preserver of health, just as its non-observance is the gateway to disease in its milder as well as in its most deadly and frightful forms.

While quarantine has been more or less practised by the civilized nations of the world for about two hundred years, yet it was reserved for this century to give it its true rank as a great custodian of public health, and to arm it with the legal power to enforce its decrees. But is it not strange that not until a comparatively recent date has sanitation been advanced to the dignity of a science, and, even now, England is the only nation that has recognized it in all its solemn importance. She has thrown around it the sanctity of law, and the safeguard of sanitary education. Her appreciation of its vast importance is embodied in her comprehensive sanitary code with its heavy penalties attached. Her sanitarians and health officers are compelled to obtain diplomas from her great Universities, which require a most rigid examination upon all branches of knowledge, pertaining, even remotely, to the subject of Hygiene. It embraces Physics and Chemistry, including methods of analysis, and use and application of the microscope; the laws of heat and the principles of pneumatics, hydrostatics and hydraulics, with especial reference to ventilation, water-supply, drainage, construction of dwellings, disposal of sewage and refuse, and sanitary engineering in general. He must also understand the laws of the realm relating to public health, sanitary statistics, origin, propagation, pathology and prevention of epidemics and infectious disease; the effects of over-crowding, vitiated air, impure water and bad or insufficient food, unhealthy occupations and the diseases they give rise to; nuisances of all kinds injurious to health; distribution of diseases within the United Kingdom, and the effects of soil, season and climates. No one can become a medical officer of health who cannot obtain a certificate of proficiency in all these branches of sanitary knowledge.

I have enumerated thus at length, at the expense of being thought tedious, to show the great importance that a great civilized nation like England attaches to the science of sanitation, and how far behind her our own favored country is in this matter, so vital, not only to the health, but to all the vast and varied commercial and industrial interests of her people.

Those who have not examined thoroughly the subject of sanitation will be startled to find how all-pervading its field of operations is. Properly comprehended, it enters into almost everything we eat, drink or wear. The household economy, municipal government, and all business operations, trades and professions, are fit subjects for its supervisory attention. At the ocean gateways, at the interior ports, and along the coastwise harbors, the ships of foreign and inland commerce must meet her ever-vigilant inspection. Neither the army, nor the

navy, nor the marine service, will escape her scrutinizing eye. And the public buildings, penitentiaries, jails, asylums, hospitals, and, indeed, all edifices of a public and private character, come within the pale of her foresight. In short, sanitation will enter into almost everything from which mankind derives its comfort and its existence. But sanitation, to be effectual, must have the co-operation of quarantine, which may be called the handmaid, or perhaps the twin-sister of sanitation.

It is accepted by the medical profession as a fact, that there are numerous diseases, of a malignant and epidemic type, which are not indigenous to the United States, but which, when brought there through the ways of commerce, take root and flourish wherever, and as long, as the pernicious conditions exist which are favorable to their development. It is evident that yellow fever is of this class. It has no legitimate right in our climate, its native home being the tropics. It can only obtain entrance into the United States by importation through the channel of trade, and when once here, will inevitably die under the deadly touch of the first good frost, if not sheltered through the winter in woolens or other protecting fabrics, or else protected in some way that shields it from the destroying effects of the temperate zone. I will here mention a significant fact in corroboration of this opinion. In looking over the mortality record of the federal army, which contains a report to the government of all cases of disease and wounds which occurred during the late war, not one case of yellow fever is reported. What was the exemption to be ascribed to, except to the strict quarantine which the necessities of war were constrained to enforce. If this disease had been indigenous to the climate of the Gulf States, would not the fact have been demonstrated by its attacking the unacclimated soldiers that made up the federal army, and indeed that constituted both armies from every section of the United States? The ordinary malarial fevers they had, but not a single case of yellow fever, although they were exposed, night and day, to all the risks and dangers of a climate and a country which was wholly foreign to that to which they had been accustomed.

I claim then that quarantine was the barrier which stayed the ingress of yellow fever into the United States during the war, and, if quarantine can prescribe limits to one, it can exclude all diseases from the country that are of foreign origin. But, see again the great and overshadowing importance in that, although one or more of these foreign pests may elude the most thorough vigilance of quarantine, yet sanitation meets them on the threshold with the inhospitable unfriendliness of purity and cleanliness, and leaves them to die of starvation in the empty garners. But, presuming quarantine admitted to be a necessity, how is it to be secured effectually without trenching upon private and public rights? Just here, I am aware political and commercial economy, and

private and public interests, will clash in giving expression to their views; but at last, in its practical working, I think these rights will be invaded more in the valueless abstract than in the inestimable practical operation. And States, municipalities and corporations, and commercial interests might well afford to tolerate a quarantine arrangement, which, entered into in good faith, and enforced with honesty and wisdom, conserved the interests of the many, and only, if at all, checked temporarily the full tide of business of a few localities, and this, too, in face of the fact that, if quarantine was left to any of these representative organizations, all would suffer to a greater or less degree, by selfish and unreasonable action.

Has not the history of quarantine during the last four years proved that the establishment of the National Board was not only a necessity, but that it is the only authority capable of acting as an arbiter between different States and communities, where there are doubtful or conflicting opinions regarding the necessity of enforcing quarantine restrictions. Its co-operation with State Boards must be entirely harmonious and devoid of conflict, as without this a thorough, safe and just quarantine will be impossible. Without presuming to decide questions of the various rights, political or otherwise, involved in the establishment of National and State quarantines for co-operative purposes, I will indulge the hope that some common ground may be found, upon which both State and National necessity may stand with harmony and with efficiency; and where the rights of neither will be asserted to the extreme point of mere abstraction, from which nothing but evil must ensue; when, on the contrary, by admitting both as equal factors in the arrangement, the health of the whole country is preserved, the great interests of the people protected, and the respect of all good men secured for their wise, impartial, and just administration of grave and responsible duties.

If these views be correct, may it not be wise to embody them in some action, by resolution or otherwise, commending both hygiene and quarantine to the most serious attention of the State and the country, and at the same time recognizing the great and useful work done by both the State and National Boards in discharging their responsible duties, as also the commendable energy employed in the same direction by the Auxiliary Sanitary Association of New Orleans? Would it not also be eminently wise to endeavor to secure from the Legislature, at its next session, such action as will make more full and complete, if possible, the sanitary code of this State?

In conclusion, gentlemen, I trust our deliberations may be pleasant and harmonious, and redound to the honor of our profession and the welfare of the State.

[The Address of the Annual Orator should follow next in order in the published proceedings, but since this address together with the Report on State Medicine are to be also published in a separate pamphlet, it has been deemed best that the address should succeed the report, and that this should be preceded by the letter immediately following, which serves as a preface to said PAMPHLET.]

A LETTER ADDRESSED TO THE PHYSICIANS AND LEGISLATORS OF LOUISIANA,

BY

The Committee on State Medicine of the La. State Medical Society.

At its last Annual Session, March 30th to April 2d, 1881, the Louisiana State Medical Society adopted all the recommendations in the following report of the Committee on State Medicine unanimously, with exception of the bills recommended for Regulating the Practice of Medicine, which were also adopted by a considerable majority, and encountered no opposition except as to one feature, hereafter referred to. At the same time, the committee was authorized to adopt such measures, and to make such modifications as might be deemed necessary to secure the practical results sought.

Accordingly, a pamphlet edition of this portion of the published Annual Transactions of the Society has been issued for distribution, especially to the physicians of this State, to members of our General Assembly, and to any citizens distinguished for the enlightened interest taken in the progress of State Medicine.

Reputable physicians unite in deprecating, and are prone violently to denounce the abuses for which remedies are herein proposed; it is, therefore, pardonable to remind them that mere denunciation is fruitless, hence childish—that the hope to correct public abuses without organized action is vain—that individual opinions must be modified to secure organized action, and that, to accomplish any great public benefit, the self sacrificing labor of all those who denounce existing evils and demand reform is imperative, and must be substituted for wordy abuse.

If a respectable majority of the physicians of this State united upon any good measures, and if each used in behalf thereof his personal influence with his own legislative representatives, most gratifying results would eventually if not promptly ensue. The medical profession of Alabama owes its present enviable condition, and the great benefits it has conferred on the public, to many years of often discouraging, but of always persistent efforts, inspired by the Alabama State Medical Association. Like efforts would produce like results in Louisiana.

The New Orleans members of the Committee on Organization of this society, being also members of this committee,

desire here to urge upon medical men throughout the State, and especially in the country parishes, the importance, nay, the necessity, of effecting local organization into parish societies, for the purpose of promoting the objects herein proposed. The organization of physicians in Alabama, the most thorough and powerful in the South, owes its vitality to the vigor of its local constituents in nearly all the counties of the State. One of the most important results of this local organization, and the one most prized by physicians generally, is the power developed at home for the protection of individual rights and the promotion of the individual interests of physicians The advantage of combined systematic action over desultory and often antagonistic struggles is as undeniable for physicians in the attainment of their legitimate objects, as for politicians in compassing their questionable schemes, or the benevolent objects for which people of all grades of intelligence combine. If physicians fail to see their interest and neglect to seize their opportunities, the fault is entirely their own.

It is earnestly urged, that whosoever may receive a copy of this report and may read it with approval or instruction, will thereafter solicit the attention, especially of legislators and of physicians, to his copy using it in such wise as may accomplish the most good.

ANNUAL REPORT FOR 1881

OF THE

COMMITTEE ON STATE MEDICINE OF THE LOUISIANA STATE MEDICAL SOCIETY.

By Stanford E. Chaille, M. D., Chairman.

The value of this report is in large part due to the self-sacrificing labor, and zealous co-operation of Drs. J. P. Davidson, S. S. Herrick, C. J. Bickham, F. W. Parham, and P. B. McCutchon, all of New Orleans, and members of the committee. Indispensable aid, in our labors for the public good, has been given by the following members of the New Orleans bar, viz: by the Hon. T. J. Semmes, Judge W. W. Howe, and Mr. S. S. Prentiss, to whom the cordial thanks of this society are due.

The following citation from the last annual report indicated the work which should be, and has been attempted:

"It is believed that this society could accomplish much, provided that its labors were directed as follows:

First. The best laws in any of our States in respect to each of the subjects recommended to the Convention of 1879 for adoption should be collected, and, after their thorough study and inquiry as to their successful action, the wisest should be selected and submitted to your consideration at our next annual session.

Second. Such of these, as might after such consideration be generally approved, should be published in such form as would secure their distribution to the profession throughout the State, in order that the members of this society and physicians generally in Louisiana might be provided with the information necessary to influence wisely members of our Legislature.

By such means it is believed that we could be instrumental in securing from the Legislature of 1882 many laws much needed to promote the progress of State medicine, and to complete the ends inaugurated by this society before the Convenof 1879."

Should the present report be approved by the society, it should at once adopt such ways and means as may be necessary to accomplish the object of the report, viz: the enactment by the legislature of the various laws recommended. In this connection, it should not be overlooked, that temporary failure to accomplish a good purpose should not cause its abandonment, above all, when there is good reason to believe, as in this case, that a united profession could secure, from legislative *candidates*, pledges in favor of public benefits, which legislative *incumbents* may refuse.

Respecting the laws, now recommended for enactment, there are some general considerations, deserving attention.

First. They include all of those subjects which the Constitutional Convention of 1879 was petitioned by this society to act upon favorably.

Second. Some of the laws which have been recommended represent, by no means, the ideal of the medical profession as to what these laws should be. But, absolute perfection is generally separated by an impassable barrier from the gradual progress, and from the small amount of relative good, which it may be practicable to secure. While great confidence is felt that the enactment *and execution* of certain laws would greatly benefit the public and profession, yet, these desirable laws have not been recommended, when believed to be inexpedient because of any of the following considerations. It would be inexpedient to petition for the enactment of laws by a legislature not likely to accede thereto, and also inexpedient to secure laws which could not be executed. Even those communities, now the most enlightened, ill appreciate the inestimable value to the people of State Medicine, hence little should be expected from ignorant communties,—for these are always characterized by still greater bigotry in favor of ancestral customs and of antiquated laws, however barbarous and objectionable these may be. Therefore, the unfortunate fact, that more than one-half the voters of Louisiana, can neither read nor write, requires the gravest consideration in connection with the question of the expediency of some of the laws most important to the interests of State Medicine. The impoverished treasury of

this State is also a most serious impediment; for, some of the new laws most needed would necessitate for their execution salaried officers, consequently additional taxation, and, it is believed to be inexpedient, at present, to petition for the enactment of such laws, notwithstanding our conviction that the resulting benefits would far exceed the evils of additional taxes and officials. The sparseness of the population of Louisiana is a third grave impediment to progress in State Medicine, for experience proves that some of its most important laws can be executed only in densely populated communities. The question of expediency involves also a consideration of the facts, that the execution of some of the laws most needed by State Medicine depends much more on the action of the private citizen than on the action of an official, that this unofficial action can be secured only by the good will of citizens sufficiently enlightened to appreciate the benefits of such laws, and that these laws lapse into nullity and generally into contempt in communities insufficiently enlightened, thereby tending to retard instead of to promote the attainment of the end for which the laws were enacted.

Effort has been made to weigh duly all of these considerations in so far as they may apply to the laws which are herein proposed for enactment. In respect to these proposed laws an urgent petition for their enactment is amply justified by the present constitution (1879) of Louisiana, which issued the following imperative mandate to our Legislature:

"ART. 178. The General Assembly *shall provide* for the interests of State Medicine in all its departments; for the protection of the people from unqualified practitioners of medicine; for protecting confidential communications made to medical men by their patients while under professional treatment, and for the purpose of such treatment; for the establishment and maintenance of a State Board of Health."

I. LAWS REGULATING THE PRACTICE OF MEDICINE.

It will be observed that the first special command is that "The General Assembly *shall* provide"—"*for the protection of the people from unqualified practitioners of medicine.*" The laws on this subject, now recommended for enactment, require some explanations.

In the first place, it may be necessary to deprive our legislators of all excuse for inaction on this subject, by the emphatic evidence that the *qualified* practitioners of Louisiana will unanimously testify that while this State has, since 1861, had laws (see Sects, 2677, 2681, Rev. Stats., 1870) for the protection of the people from unqualified practitioners of medicine, yet, that these laws have never accomplished their purpose, and can never furnish that protection which the constitution commands *shall be* provided.

In the second place, it must be noted that our present inefficient and unexecuted laws are based on a system of registration, and that this system has met with such success in Great Britian that it has been adopted in several of our States, and in fact is the only system which has thus far given satisfaction. For this and other reasons it has been deemed expedient to advocate a retention of this system, while insisting that such amendments of and additions to our present laws should be made as are calculated to transform our void registration system and disregarded laws into a serviceable system, and regarded laws. The constitution, the public good and the medical profession unite in requiring from the Legislature laws which shall, in reasonable degree, protect *in fact*, and not solely in print.

In the third place, it should be remembered that the proper regulation of the practice of medicine is a most perplexing subject for legislators. A majority of our States have attempted to regulate the practice of medicine by law, but it cannot be claimed that, of numerous legislative experiments, any one has yet proved entirely satisfactory. These experiments teach the following useful lessons:

1st. Laws which debar homeopaths, eclectics and other practitioners of any special or exclusive system of therapeutics, from the practice of medicine cannot be enforced, if enacted. The proselytes of such systems must be permitted to practice, *provided* that they be found qualified by the possession of an adequate knowledge of the undisputed principles and practice of chemistry, anatomy, physiology, medicine, surgery, and obstetrics.

2d. No laws have yet established a satisfactory method to determine the qualifications necessary for a practitioner of medicine.

3d. No laws have yet solved satisfactorily what agency or agents should test these qualifications, nor the authority by whom these agents should be appointed.

4th. No adequate measures have ever yet been devised to inflict the penalties of the law on its violators.

These difficulties warn us against indulging in hopes too sanguine, and teach us to resign ourselves to gradual progress, and to be content with so much relative good as may be practicable under the present conditions of our existence. Eminent legal advice and careful study of the subject unite in recommending for enactment the following proposed laws, which are in truth, no more than amendments to our present laws,—such amendments as are necessary to render these laws efficient. It is confidently believed, that even if they should not prove entirely satisfactory in practice, they would none the less be a great improvement on our present laws, and would serve as a good basis for better laws and for future progress.

[Before submitting these proposed laws to the reader's consideration, it is advisable to make the following explanation: All who have studied the subject unite in the conviction that any laws regulating the practice of medicine should be based on a thorough and efficient registration system, and that this system requires one non-political and trustworthy central head; but, experience is not conclusive, and opinions vary respecting what agency should be entrusted with this central authority. In the following bills, this authority was assigned to "the medical department of the University of Louisiana," and the spaces now left in blank were filled either with the words "the Medical Department University Louisiana," or with the words, "its dean or other officer thereunto authorized by the Medical Department of the University of Louisiana." Thus completed the proposed laws were adopted by the Louisiana State Medical Society. But, unfortunately, this provision has encountered serious opposition in the ranks of the medical profession, where unanimity is most essential to success; for, the faculty of the Medical Department took action, April 19th, 1881, to the effect, that, while it approved a registration system and the principles of the law proposed, it was unwilling to be appointed the agent of such system, and would, if it became necessary, petition the legislature to that effect. This position was maintained on the grounds that the Medical Department was purely an educational institution, and that its purpose, its untarnished reputation and its success would be jeopardized by affixing its official signature to any diplomas other than of its own graduates,—and above all, to the diplomas of those irregular institutions, which the law would regard as having a "reputable and respectable standing," while the faculty of the medical department could never regard them in any such professional light.

In view of these objections, the committee has deemed itself authorized to refrain from specifying in the bills recommended the central agent of the proposed registration system, entrusting this selection to the wisdom of the General Assembly. In some States this authority has been conferred on the State Medical Society, in others, on the State Board of Health, and in others, on a special board appointed for the purpose.]

AN ACT relative to the Practice of Medicine and Surgery.

SECTION 1. *Be it enacted by the General Assembly of the State of Louisana*, That no person shall be allowed to practice medicine or surgery as a means of livelihood, in any of its departments, without first making affidavit before a duly qualified judge, or justice of the peace, or clerk of the district court, or notary public, in the parish wherein he resides, of his having received the degree of Doctor of Medicine from a regularly incorporated Medical Institution, of respectable standing, in America or in Europe, and designating its name

and locality, and the date of his diploma; such degree to be manifested by a diploma issued by such institution, and its respectable standing to be evidenced by the endorsement or certificate of the ——— written on the face of said diploma, and signed by ———; said affidavit shall also contain the full name of the person making the same, the date and place of his birth, and the names of the places where he may have previously practiced medicine or surgery. And for every diploma certified or viséd by the said ——— a fee of five dollars shall be paid by the applicant, and a record of diplomas certified shall be preserved by said ——— and copies thereof, certified by the ———, shall be received in evidence by the courts of this State; *provided*, that the said ——— shall be required to certify the diploma of any medical institution of credit and respectability, without regard to its system of therapeutics, and whether the same be regular, homœopathic, or eclectic.

SEC. 2. *Be it further enacted &c.*, That the affidavit required in the first section of this act shall be recorded in the office of the Clerk of the District Court of the parish, who shall make such record in a book to be kept for that purpose only, and also certify such recordation by an endorsement on the original affidavit, which the affiant shall transmit to the ———; the officer before whom the affidavit is made, unless he be a judge, shall be entitled to a fee of fifty cents; and the officer recording the same to a fee of one dollar; the ——— shall charge no fee for the preservation of the original affidavits, but a copy thereof duly certified by the ——— shall be admissible in evidence, and a fee of fifty cents shall be paid for said copy.

SEC. 3. *Be it further enacted, etc.*, That the provisions of this act shall not apply to female practitioners of midwifery as such, nor to persons who have been practicing medicine or surgery in this State without diplomas for the period of ten years prior to the year 1870, nor to persons who have been practising medicine or surgery in this State with diplomas emanating from a regularly incorporated medical institution of reputable standing, in America or in Europe, for ten years prior to the passage of this act; provided, that such practitioners of medicine or surgery shall make an affidavit before any judge, justice of the peace, notary public, or clerk of court of the parish wherein he resides, setting forth the following facts: the full name of the person making the affidavit, the date and place of his birth, the date of his diploma if he have any, and the name and locality of the institution by which it was made, the date and place where he began the practice of medicine in Louisiana, and the names of the places where he may have previously practised medicine or surgery; such affidavit shall be transmitted or delivered to the ———, and shall entitle the affiant to be placed on the list of registered physicians or surgeons, the publication of which is hereinafter

provided for, and the officer before whom such affidavit is made shall be entitled to a fee of fifty cents; and the said ——— shall preserve said affidavits, and a copy thereof signed by the ——— shall be received as evidence in the courts of this State, and for such copy a fee of fifty cents shall be paid. And any person, who shall in the affidavit required by this section wilfully make any false statement, shall be deemed guilty of the crime of perjury and punished in the manner provided by existing laws for the punishment of the crime of perjury.

SEC. 4. *Be it further enacted, etc.*, That a copy of the affidavit recorded by the Clerk of the District Court, certified by him, shall be *prima facie* evidence that the person making the affidavit is a duly registered physician or surgeon, and a certified copy of the original affidavit filed with the ——— or a certificate emanating from said ——— that the name of the person mentioned in the certificate is on the list of registered physi cians and surgeons, shall be *conclusive* evidence of the fact.

SEC. 5. *Be it further enacted etc.*, That it shall be the duty of the ——— to publish annually, in the official journal of the State in New Orleans, and if there be no such journal, in one of the daily newspapers published in New Orleans, a list of all registered physicians and surgeons in the State and their places of residence, and such published list shall be received in evidence by the courts of this State, as proof that the physicians and surgeons therein named are duly registered as required by law; and the said ——— is hereby required to strike from said list the names of such persons who may have been convicted of any infamous crimes by any court of this State, or of the United States, or of any State of the United States; whether such conviction occur prior or posterior to registration, and it is also empowered to strike from said list the names of persons who may die after registration; if any person is improperly stricken from the said list he may be restored by writ of mandamus issued by the judicial tribunals of the State, sitting in New Orleans, competent to investigate such cases.

SEC. 6. *Be it further enacted, etc.*, That any practitioner of medicine or surgery, failing to comply with the requirements of this act shall not be exempt from jury, or militia duty, nor be permitted to collect any fees or charges for services rendered, nor be allowed to testify as a medical or surgical expert in legal or State medicine in any court of this State, nor to execute any certificate as a surgeon or physician, nor to hold any medical office, nor to be recognized by the State or any parish or municipal corporation as a physician or surgeon, nor shall he be entitled to enjoy any of the privileges, rights or exemptions granted to physicians or surgeons by the laws of this State; and moreover he shall forfeit and be liable to a penalty of one hundred dollars, for each and every violation

of this act, and for each and every time he so violates it, said sum or sums to be recovered in a civil action to be brought before any court of competent jurisdiction, in the name and for the benefit of the Charity Hospital at New Orleans, and he shall in addition thereto, be subject to criminal prosecution, and be punished in the manner prescribed by law for violations of this act.

SEC. 7. *Be it further enacted, etc*, That this act shall not apply to practitioners of medicine or surgery, residing and practicing in other States, who may be summoned, in special instances, to attend patients in the State of Louisiana, by any registered physician.

SEC. 8. *Be it further enacted, etc.*, That sections 2677, 2678, 2679, 2680 and 2681 of the Revised Statutes of Louisiana of 1870, be and the same are hereby repealed.

SEC. 9. *Be it further enacted, etc.*, That this act shall take effect on 1st January, 1883.

AN ACT to Punish the Unlawful Practice of Medicine or Surgery.

Be it enacted by the General Assembly of Louisiana, That, whoever shall practice Medicine or Surgery in violation of the provisions of an act passed at the present session of the General Assembly, entitled, "an act relative to the practice of Medicine and Surgery" shall, on conviction thereof, be punished for each and every offence by imprisonment for not less than one month nor more than one year.

SEC. 2 *Be it further enacted &c.*, That this act shall take effect on the first day of February, 1883.

[Succeeding the Commitees' Report on State Medicine, there will be found the able and instructive address of the Hon. T. J. Semmes, which continues the consideration of Laws Regulating the Practice of Medicine.]

II. CONFIDENTIAL COMMUNICATIONS TO PHYSICIANS.

The second special mandate of the Constitution is, that "the General Assembly *shall* provide"—"for protecting confidential communications made to medical men by their patients while under professional treatment, and for the purpose of such treatment."

Several States have laws which secure this protection. Among these States are New York and Iowa, and their laws are as follows, the law of Iowa deserving the preference.

The New York law reads: "A person duly authorized to practice physic or surgery shall not be allowed to disclose any information which he has acquired in attending a patient in a professional capacity [without the consent of such patient], and which information was necessary to enable him to attend in that capacity."

The Iowa law reads: "No practising attorney, counselor,

physician, surgeon, minister of the gospel, or priest of any denomination, shall be allowed, in giving testimony, to disclose any confidential communications properly entrusted to him in his professional capacity, and necessary and proper to enable him to discharge the functions of his office according to the usual course of practice or discipline. Such prohibition shall not apply to cases, where the party, in whose favor the same are made, waives the rights conferred." See the "Code of Iowa, 1873," p. 565, Sec. 3643.

Among many criticisms on the operation of these laws, none have been observed unfavorable to them.

III. State Board of Health.

The third special mandate of the constitution is, that "The General Assembly *shall provide*" "for the establishment and maintenance of a State Board of Health."

It will be convenient to consider this subject under two heads; first, as to the amendments needed to render our present laws more efficient and satisfactory; and second, as to the additional laws which may be required to fulfill the mandate of our constitution.

First, Amendments to Our Laws.

There are at least three amendments which are manifestly required, and therefore deserve prompt attention.

A.—*Appointment of Members of the Board of Health.*

The first sentence, Section 1, Act No. 80, p. 116, of the Acts of 1877, reads: "The Board of Health of the State of Louisina shall hereafter consist of nine members, four of whom shall be appointed by the Governor, by and with the advice and consent of the Senate, and five of whom shall be *elected* by the Council of the City of New Orleans." It is earnestly urged that this sentence shall be so amended that the last fourteen words shall be made to read, "*five of whom shall be appointed by the Mayor, by and with the advice and consent of the Council of the City of New Orleans.*" The same principle is involved in the selection of both State and city members, and the method adopted in the former should be also applied to the latter. It has long been proverbial, that "corporations have no souls," all contrivances by which official responsibility is divided and diminished are most objectionable, and while *the election* of city members *by the Council* is wrong in theory, experience proves it to be mischeivous in practice.

B.—*The Resident Physician of the Mississippi River Quarantine Station and his Salary.*

Misplaced responsibility, as well as divided reponsibility, is most objectionable. A striking instance of misplaced respon-

sibility occurs in the first sentence sections 3042 and 3039, pp. 592-3 Rev. Stats. 1870, wherein the law directs that the resident physician of the Mississippi River Quarantine Station shall be *appointed by the Governor*; that his salary shall be $5000 per annum, and that he shall be authorized to employ an assistant at $2000 per annum. It is urged that public opinion, and also the fundamental principle on which depends the existence of a board of health, unite in fixing on the Board of Health, and not on the Governor, the responsibility for the administration of the Mississippi River Quarantine Station; and therefore that the law should be so amended, that the Board of Health should have the same power to appoint, fix the salary of, and control the officers and employees at this station, that said Board has in respect to all other sanitary officers and employees, whether these be located in New Orleans or at all the Quarantine stations other than the one at the Mississippi River. (See Sec. 3041, p. 593, Rev. Stat., 1870.) It is deemed important that,—if the present laws should be so repealed and amended as to confer on the Board of Health the power to appoint the Resident Physician of the Mississippi River Quarantine Station, and also his assistant,—the amended law should not fail to confer on the Board, at the same time, the power to fix their salaries; for, if this were neglected, there is reason to fear that the appointment even of the members of the Board would be politically so managed as to be dependent on and subordinate to their pledges in behalf of some favored candidate for the office of Resident Physician of the Mississippi River Quarantine Station,—an office, which now has a salary of $5000, now confers another salary of $2000, and now distributes other patronage; so that this one office rivals, in respect to patronage, that Board to which it should be entirely subordinate.

C—*Quarantine Fees on Vessels.*

The present basis of quarantine fees has been declared unconstitutional by the Federal Courts, inasmuch as they are construed as a tax on tonnage. Repeated efforts to amend the law so as to obviate this objection have been made, and they should be continued; for, the resources of the Board are already greatly impaired and still more seriously threatened.

The following is therefore proposed:

3. *Be it enacted by the General Assembly of Louisiana*, That that portion of Section 3402 of the Revised Statutes of 1870, relating to quarantine fees, be amended and re-enacted so as to read as follows:

The Resident Physician shall require for every certificate thus furnished the following inspection fees, according to the whole number of persons aboard any vessel, for any number not exceeding 6 persons, $7.50; for any number above 6 and

not exceeding 10 persons, $10; for any number above 10 and not exceeding 20 persons, $15; for any number above 20 and not exceeding 40 persons, $20; for any number above 40 and not exceeding 80 persons, $25; for any number of persons above 80, $30; *provided*, that the Board of Health may, at its discretion, reduce or remit the inspection fees on any vessel, having reference in all cases to the number of persons aboard.

Second—Additional Laws Required.

Registration of Vital Statistics and Local Boards of Health.

Sanitarians unanimously recognize, that the registration of vital statistics is indispensable to public hygiene, and to the efficiency of boards of health; hence, no expert in State medicine can ever admit, that our constitution has been complied with in its mandate, that, "The General Assembly *shall* provide for the interest of State medicine in all its departments," until the General Assembly shall have established an efficient system for the registration of vital statistics. For such a system, competent officials, acting under some organization, are indispensable; and it is believed, that these requirements can be best supplied by local boards of health, subordinate to a State Board of Health. This conclusion gains strength from the following facts: The Constitution commands that "the General Assembly *shall* provide"—"for the establishment and maintenance of a *State* Board of Health," and, inasmuch as Louisiana has no *State* Board of Health except in name—for, our present so-called *State* board is in fact no more than a New Orleans Board of Health,—the General Assembly cannot comply with the Constitutional mandate except by one of two ways, either by extending the jurisdiction of the present board generally over the whole State, or by organizing local boards of health subordinate to the present board; of these two ways, the latter would prove the more efficient.

Notwithstanding preceding considerations, it is indispensable, for the attainment of practical results, to recognize the extreme difficulty of establishing, at present, in Louisiana, efficient local boards of health, and an efficient system for the registration of vital statistics. Some estimate of the difficulty can be formed from the fact, that although numerous efforts have been made by various States, not one of these efforts can yet be claimed to have met with satisfactory success. The few States and communities which have succeeded, in a measure anywise encouraging, have been those characterized by density of population, and by a public opinion rendered appreciative of the accruing benefits by superior enlightenment. Louisiana is far from possessing either of these requisites, and no instance of the organization of efficient local boards and of the efficient registration of vital statistics can be cited among English-speaking communities, as sparsely populated and as

illiterate as is Louisiana. None the less, effort should be made at least to inaugurate methods necessary to secure the ends so desirable for our future progress, and effort should certainly be made to obey our constitution in spirit and in letter.

While these various considerations justify the claim that local boards of health, and a system for the registration of vital statistics should be established by law, they at the same time teach that the more moderate these claims, the more apt they will be to meet with success—with the inauguration of some system which the future may build upon. Two additional facts enforce this conclusion. In 1878, the Legislative Committee of this Society published a circular, which was widely distributed to the physicians and to the legislators of Louisiana, and which recommended efficient and obligatory laws for local boards of health, and the registration of vital statistics; the Legislature "tabled" them, and even the physicians failed to manifest an enlightened interest in the subject. Further, the experience of other States seems to prove that however good may be the laws enacted on this subject, their execution can never be enforced in communities insufficiently enlightened to desire and to appreciate such laws.

Hence, it has been concluded to be wiser to recommend, at present, laws which appear to be *the minimum* requirement of the constitution, laws which will be obligatory only on those communities outside of New Orleans, which become sufficiently enlightened to appreciate them, laws which, though now far below the requirements of State Medicine, may in the future be so amended as to secure eventually the efficiency so much needed for the public good. These recommended laws are as follows:

AN ACT to provide for the organization of Local Boards of Health in the State of Louisiana.

SECTION 1. *Be it enacted by the General Assembly of the State of Louisiana*, That the municipal authorities of all incorporated towns where boards of health do not now exist, be empowered to constitute themselves local boards of health for the exercise of the following powers and functions, so far as they may not conflict with the laws of the State: To pass ordinances for the exclusion and repression of contagious and infectious diseases; for defining and abating nuisances dangerous to the public health; for regulating drainage and ventilation with reference to human habitations and places of business and public resort; for the collection and recording of vital statistics; for establishing penalties by fine not exceeding —— dollars, or imprisonment not exceeding —— days; for raising and appropriating funds for the purpose of carrying out the above objects.

SEC. 2. *Be it further enacted, etc.*, That any municipal authorities, having constituted themselves a board of health by formal procedure under this act, shall choose a suitable registered physician as their executive officer to be styled health officer, whose duties shall be defined and compensation be provided for by said authorities.

SEC. 3. *Be it further enacted, etc.*, That the police jury in each parish be empowered to constitute itself a board of health in and for its parish, with the same powers named in Section 1 of this act, and with the provisions of Section 2 for carrying out said objects.

SEC. 4. *Be it further enacted, etc.*, That local boards of health, both those now existing and those which may be hereafter created, shall be auxiliary to and act in harmony with the State Board of Health, and shall make reports annually in the month of January to said State Board of Health, located at New Orleans, exhibiting their organization and a synopsis of their operations during the previous year, the same to be embodied in the annual report of the State Board.

SEC. 5. *Be it further enacted, etc.*, That all laws and parts of laws in conflict with this act be and are hereby repealed, and that this act take effect from and after its passage.

In connection with these proposed laws, for the registration of vital statistics and for local boards of health, outside of New Orleans, it will be well to recall all the laws which now exist on these subjects.

SEC. 338–343 (inclusive) of the Rev. Stats., 1870, establish a system for the registration of births and deaths by the parish recorders, but this system was rendered totally worthless even in theory, by Sec. 344 which declares, "no person out of the parish of Orleans shall be under any legal obligation to have a birth or death recorded." That this system was totally worthless in practice, so far as sanitary science is concerned, was amply proved by the fact that it was obligatory in Orleans parish, and yet yielded even there no good results whatever.

Our present laws respecting all boards of health, other than our so-called *State* Board of Health, are contained in the Revised Statutes, 1870, and are as follows:

"SEC. 3062. The authorities of incorporated *towns* and *cities* are authorized to enact ordinances to protect them from the introduction of contagious and epidemical diseases.

"SEC. 3063. The police juries shall have power to enact ordinances and regulations, not inconsistent with the laws and constitution of the United States or of this State, to protect their respective *parishes* against the introduction of all and every kind of contagious or epidemical diseases."

V.—FŒTICIDAL AND ADULTERATED DRUGS, FOODS, ETC.

While no laws on this subject have been prepared for recommendation to our Legislature, it is certain that the public good

requires and, therefore, that the General Assembly should enact laws, *to prevent the advertisement and the sale of all fœticidal drugs and instruments, of all adulterated drugs and foods,* detrimental to morality or health.*

VI. Sanitary Instruction.

The present is removed only a few generations from a past whose chief knowledge and best literature were then, as they certainly are not now, accessible only in the dead Greek and Roman languages, from a past characterized by its gross ignorance of the human body and of its requirements for health. The resulting influences continue to dominate over our present civilization to such an extent, that even the educated are apt to believe that it is more important to children to learn the geography of a distant country than of their own bodies, and the habits of defunct Greeks and Romans than those habits of their own living bodies which are fraught with the utmost good or evil to themselves as well as to their descendants. Since, even the educated are so erroneously educated, it is not strange that even they should ill appreciate the interests of hygiene and of State Medicine, and it is still less strange that in respect to these subjects, illiterate communities should be, to a far greater extent, characterized by self-hurtful prejudices, by demoralizing superstitions, and by barbarous inappreciation of their ownbest interests. All modern authorities on education agree, that in estimating the respective values of different kinds of knowledge, the educator must attach the first and highest value to "that education which prepares for *direct self-preservation*," and that this imperatively requires a knowledge of physiology and hygiene; so that, an enlightened common sense is forced to assign the first place to this study, as soon as a child has learned to read, write and cipher sufficiently well to study it with profit. The sooner this manifest conclusion is reached by teachers, the sooner will civilization reap the inestimable benefits which must accrue from the cultivation of public hygiene, and of every other branch of State Medicine. No assurance is felt that any laws on the subject would promote this end, hence none are now recommended. But, since information from an official source indicates that physiology and hygiene are not taught in the public schools of Louisiana, except only in the high schools of the city of New Orleans, the adoption is recommended of the following resolutions:

Whereas, A proper appreciation of public and domesti hygiene cannot be entertained by the mass of our people, from ignorance of its elements, and,

Whereas, Progress in sanitation is dependent on the instruc-

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* Act No. 20, p. 23, "Acts of 1880," concerns the adulteration of foods.

tion of the rising generation in the conditions which relate to the preservation of health; therefore,

Resolved, That we urge, and will exercise personally our influence upon all concerned with the edcuation of our youth of both sexes, and particularly upon teachers and those in authority over our schools, the importance of providing instruction upon physiology and hygiene, through lectures or textbooks, suitable to the capacity of pupils, in all schools above the primary grade.

Resolved, That Superintendents and Boards of Education be urged. as soon as practicable, to require candidates, for positions as teachers in schools, to be examined in the above subjects, and to show a reasonable acquaintance with the same.

VII. Trial of Persons Accused of Crime, and Alleged to be Insane.

The Constitution of Louisiana commands that, "The General Assembly *shall* provide for the interests of State Medicine in *all its departments*." These departments include the four great branches of medical education, public hygeine, medical jurisprudence, and public institutions for the sick, etc. Preeceding recommendations concern the interests chiefly of medical education and of public hygiene. Four recommendations in the interests of medical jurisprudence will now be considered.

The legal methods adopted for the trial of persons accused of crime when alleged to be insane are faulty, and the following considerations are urged upon the attention of the General Assemby:

It is conceded that, within this century, unfortunates have been legally murdered for illegal acts, the product of disease, and not of a "vicious will." To prevent these "bitter mockeries of justice," Anglo-American law, so jealous of the "liberty of the subject," fails not only to provide him, when his life is imperiled through brain-disease, with competent experts, but also to provide these with proper time and opportunity to dicide a question so difficult as doubtful sanity. It is not strange that decisions reached through such defective means should cause constant dissatisfaction, nor that this should have been more serious prior to the establishment of State Lunatic Asylums; for it then occurred that he who might be acquitted of homicide, because of insanity, was freed by the law, and permitted to live a constant danger to society.

Maine, in 1847, wisely enactad that "when any person is indicted for a criminal offence, or is committed to jail on a charge thereof, . . . any judge of the court before which he is to be tried, when a plea of insanity is made in court, or he is notified that it will be made, may . . . order such person into the care of the superintendent of the insane hospital, to be detained and observed by him till the further

order of the court, that the truth or the falsity of the plea may be ascertained." New York, in 1874, enacted laws which provide for "an investigation of the sanity or insanity of the accused, as a separate and independent proceeding from the trial of the indictment," and, after such preliminary investigation, "leave the question of the guilt or innocence of the accused to be tried by itself. Thus have Maine and New York* lessened the frequent difficulty of choosing between "inhumanity to disease, and indulgence to crime;" and the action of these States deserves the serious consideration of this and of other States destitute of equally wise laws.

VIII. Compensation of Experts.

The question, whether a court can force a medical expert to testify without securing him adequate compensation, has in recent years excited so much interest that medical societies have even resolved to raise the issue and force the courts to a decision. This was done in Indiana, and the following facts are pertinent to this question. English courts have decided that a scientific expert need not attend a subpœna, that his testimony cannot be forced, and that he must be compensated. In 1877 the Supreme Court of Alabama decided to the contrary; but, also in 1877, a circuit court of West Virginia concurred in the English view; in 1878, Judge Clark, in the case of the "State of Texas vs. Jasper Weathers," decided that he "knew of no law to force a physician to attend court, and testify as an expert, without compensation;" and, also in 1878, the Supreme Court of Indiana, reversing the decision of a lower court, maintained the expert's right to compensation. The Iowa Code of 1873, page 593, sec. 3814 (and probably the laws of some other States), wisely provides that "witnesses called to testify only to an opinion, founded on special study or experience in any branch of science, or to make scientific or professional examinations, and to state the results thereof, shall receive additional compensation, to be fixed by the court, with reference to the value of the time employed, and the degree of learning or skill required." This law grants all the medical profession demands, and its enactment by the General Assembly of Louisiana is urgently recommended.

IX. The Coroner and his Duties.

The office of Coroner owes its persistent existence chiefly to hereditary prejudice and barbarous precedent. It originated in England in a remote past, and under very different conditions from those now prevailing in either England or in the United States, for, at its origin and during centuries of its ex-

* See Sec. 1, Chap. 137, p. 898, "Rev. Stat. Maine, 1871," and "Laws of New York," Chap. 416 pp. 567–571 of 1874, and the amendment thereto, viz.: Chap. 574 of 1875, and Chap. 267 of 1876.

istence, England had no institutions for medical education, the practice of medicine and surgery was in the hands of priests and barbers, there were no educated physicians, and medico-legal experts were not yet dreamed of. It is not singular that under such conditions of ignorance, an officer, having no knowledge of medicine and little knowledge of law, should have been required to fill an office which now requires much medical and some legal knowledge; but it is singular and instructive to find the present generation still clinging, like Chinese to the poor stick which served his ancestors as a plow, to an institution which advancing civilization has rendered absurd. Is not an institution absurd which necessitates that an officer, in order properly to discharge the duties of his office, shall be both a medical and a legal expert, and yet requires that he need be nothing more than an expert demagogue? Is not an institution absurd which encumbers itself with an incompetent officer, with a useless and expensive jury, and with the collection of evidence so worthless that the final court of law concedes to it no authority? In truth, the office of Coroner has become so anomalous and absurd, that there now remains no one, who has given any serious study to the subject, who hesitates to denounce it unsparingly. It has no defenders except among the thoughtless, ignorant, and blind followers of hereditary custom, who however do not hesitate inconsistently to deride the ancestor-worship of the heathen Chinee. The English Parliament, prompted by the British Medical Association, has during the past six years, repeatedly admitted the gross deficiencies of the coronial system and promised the needed reform; in several of the United States the absurdity of the Coroner's office has repeatedly been denounced; but it was left to Massachusetts, on May 9th, 1877, to *do* with ease that which, so far, others had only *talked* about. In Massachusetts, as elsewhere, the Coroner had been required to discharge the incompatible duties of medical examiner and of judge—that is, of both a medical and legal expert—but this ill assorted union of centuries was divorced, and Massachusetts wisely abolished the office of Coroner and thereby the Coroner's jury, inaugurating the "Medical Examiner" for the performance of the Coroner's important medical duties, and transferring his legal duties to the courts already established, thus guiding its action by the common sense principle that "whether a homicide has been committed or not is a *medical* question, and whether that homicide be the result of accident, or be justifiable homicide, or manslaughter, or murder, is a legal question." All published reports of the results of this law concur in representing that the new law has given great satisfaction, and has reduced, by not less than one-third, the expenses of the Coroner's office. How infinitely absurd it is to find legislatures, claiming to be enlightened and civilized, clinging to an institution which is ridiculous in

theory, which is most unsatisfactory in practice, and which forces their ignorant constituents to pay *one-third more* for such an institution than for one which in theory challenges common sense, and has proved in practice much more satisfactory.

Although these views were urged upon the Constitutional Convention of 1879, they had no influence with it, except to induce it to ordain most unwisely that coroners should continue to be elected by the people, instead of being appointed by the Governor or by parish judges, and to ordain, with greater wisdom, "Art. 120. The coroner in each parish *shall be a doctor of medicine, regularly licensed to practice*, and ex-officio parish physician; provided, this article shall not apply to any parish in which there is no licensed physician who will accept the office." In addition, the duties of coroner were left as prescribed by existing laws.

The sole practical question now is, to what extent, consistent with our present constitution, can existing laws be so amended as to conform to the principle of the Massachusetts law, which is the principle of common sense, and is to the effect that the coronial *doctor* should not be required to discharge *legal* duties for which he is by education unfit, but that these legal duties should be transferred to the courts already established for the discharge of similar legal duties? How far the interests of medical jurisprudence are involved in the answer to this question may be inferred from the facts, that, if the statistics for New Orleans—the only statistics available—be accepted as a fair basis for calculating the same facts for the whole State, then the coroners of Louisiana annually hold about 3300 *views* and about 1200 *inquests*, out of which grow more than 200 *criminal trials*. These figures are eloquent of death, misfortune, sorrow, and no one having the public good at heart should remain indifferent as to the best method for obtaining, on this subject, that "best attainable evidence," which justice requires, but which our present laws very certainly do not secure.

It is deemed advisable to append the Massachusetts law, which lawyers assert can be readily so modified that our constitution (See arts. 118, 120, 147,) would not be violated, and yet the fundamental principle of this law—viz: the restriction of medical duties to doctors, and of legal duties to lawyers—would be established.

"An Act to abolish the office of Coroner and to provide for medical examinations and inquest in cases of death by violence:

Be it enacted, etc., as follows:

SECTION 1. The offices of Coroner and special Coroner are hereby abolished.

SEC. 2. The Governor shall nominate and by and with the advice and consent of the council shall appoint, in the County

of Suffolk not exceeding two, and in each other county not exceeding the number to be designated by the County Commissioners, as hereinafter provided, able and discreet men, learned in the science of medicine, to be *Medical Examiners* and every such nomination shall be made at least seven days prior to such appointment.

SEC. 3. In the County of Suffolk each Medical Examiner shall receive, in full for all services performed by him, an annual salary of three thousand dollars, to be paid quarterly from the treasury of said county; and in other counties they shall receive for a view, without an autopsy, four dollars; for a view and autopsy, thirty dollars; and travel, at the rate of five cents per mile, to and from the place of the view.

SEC. 4. Medical Examiners shall hold their offices for the term of seven years from the time of appointment, but shall be liable to removal from office at any time by the Governor and council for cause shown.

SEC. 5. Each Medical Examiner, before entering upon the duties of his office, shall be sworn and give bond with sureties, in the sum of five thousand dollars, to the treasurer of the county, conditional for the faithful performance of the duties of his office. If a Medical Examiner neglects or refuses to give bond as herein required, for the period of thirty days after his appointment, the same shall be void, and another shall be made instead thereof.

SEC. 6. The County Commissioners in each county shall, as soon as may be, after the passage of this Act, divide their several counties into suitable districts for the appointment of one Medical Examiner in each district under this Act; and when such division is made, shall at once certify their action to the Seretary of the Commonwealth, who shall lay such certificate before the Governor and Council; but nothing herein shall prevent any Medical Examiner from acting as such in any part of his county.

SEC. 7. Medical Examiners shall make examinations, as hereinafter provided, upon the view of the dead bodies of such persons only as are supposed to have come to their death by violence.

SEC. 8. Whenever a Medical Examiner has notice that there has been found, or is lying within his county, the dead body of a person who is supposed to have come to his death by violence, he shall forthwith repair to the place where such body lies and take charge of the same; and if, on view thereof, and personal inquiry into the cause and manner of the death, he deems a further examination necessary, he shall, upon being authorized in writing by the district attorney, mayor or selectmen of the district, city or town where such body lies, in the presence of two or more discreet persons, whose attendance he may compel by subpœna if necessary, make an autopsy, and then and there, carefully reduce or cause to be reduced to

writing, every fact and circumstance tending to show the condition of the body, and the cause and manner of death, together with the names and addresses of said witnesses, which record he shall subscribe. Before making such autopsy he shall call the attention of said witnesses to the position and appearance of the body.

SEC. 9 If upon such view, personal inquiry or autopsy, he shall be of opinion that the death was caused by violence, he shall at once notify the District Attorney and a justice of the district, police or municipal court for the district or city in which the body lies, or a trial justice, and shall file a duly attested copy of the record of his autopsy in such court, or with such justice, and a like copy with such District Attorney; and shall in all cases certify to the clerk or registrar having the custody of the births, marriages and deaths in the city or town in which the person deceased came to his death, the name and residence of the person deceased, if known, or a description of his person, as full as may be for identification, when the name and residence cannot be ascertained, together with the cause and manner in and by which the person deceased came to his death.

SEC, 10. The court or trial justice shall thereupon hold an inquest, which may be private, in which case any or all persons than those required to be present by the provisions of this chapter, may be excluded from the place where the same is held; and said court or trial justice may direct the witnesses to be kept separate, so that they cannot converse with each other until they have been examined. The District Attorney, or some person designated by him, may attend the inquest, and may examine all witnesses. An inquest shall be held in all cases of death by accident upon any railroad; and the District Attorney or the Attorney-General may direct an inquest to be held in tha case of any other casualty from which the death of any person results, if in his opinion such inquest is necessary or expedient.

SEC. 11. The justice or District Attorney, may issue subpœnas for witnesses, returnable before such court or trial justice. The persons served with such process shall be allowed the same fees and their attendance may be enforced in the same manner, and they shall be subject to the same penalties; or if served with a subpœna in behalf of the Commonwealth in a criminal prosecution pending in said court, or before said trial justice.

SEC. 12. The presiding justice or trial justice shall, after hearing the testimony, draw up and sign a report, in which he shall find and certify when, where and by what means the person deceased came to his death, his name if known, and all material circumstances attending his death; and if it appears that his death resulted wholly or in part from the unlawful act of any other person, he shall further state, if known

to him, the name of such person and of any person whose unlawful act contributed to such death, which report he shall file with the records of the superior court in the county, wherein the inquest is held.

SEC. 13. If the justice finds that murder, manslaughter, or an assault has been committed, he may bind over, as in criminal prosecutions, such witnesses as he deems necessary, or as the district attorney may designate, to appear and testify at the court in which an indictment may be found or presented.

SEC. 14. If a person charged by the report with the commission of any offence, is not in custody, the justice shall forthwith issue process for his apprehension, and such process shall be made returnabble before any court or magistrate having jurisdiction in the premises, who shall proceed therein in the manner required by law; but nothing herein shall prevent any justice from issuing such process before the finding of such report if it be otherwise lawful to issue the same.

SEC. 15. If the Medical Examiner reports that the death was not caused by violence, and the District Attorney or the Attorney General shall be of a contrary opinion, either the District Attorney or the Attorney General may direct an inquest to be held in accordance with the provisions of this act, notwithstanding the report, at which inquest he, or some person designated by him, shall be present and examine all the witnesses.

SEC. 16. The Medical Examiner may, if he deems it necessary, call a chemist to aid in the examination of the body of substances, supposed to have caused or contributed to the death, and such chemist shall be entitled to such compensation for his services as the Medical Examiner certifies to be just and reasonable, the same being audited and allowed in the manner herein provided. The clerk or amanuensis, if any, employed to reduce to writing the results of the medical examination or autopsy, shall be allowed for his compensation two dollars per day.

SEC. 17. When a Medical Examiner views or makes an examination of the dead body of a stranger, he shall cause the body to be decently buried; and if he certifies that he has made a careful inquiry, and that to the best of his knowledge and belief the person found dead is a stranger, having no settlement in any city or town of this commonwealth, his fees, with the actual expense of burial, shall be paid from the treasury of the commonwealth. In all other cases the expense of the burial shall be paid by the city or town, and all other expenses by the county, wherein the body is found.

SEC. 18. When services are rendered in bringing to land the dead body of a person found in any of the harbors, rivers or waters of the commonwealth, the Medical Examiner may allow such compensation for said services as he deems reasonable; but this provision shall not entitle any person to

compensation for sevices rendered in searching for such dead body.

SEC. 19. In all cases arising under the provisions of this Act, the Medical Examiner shall take charge of any money or other personal property of the decaesed, found upon or near the body, and deliver the same to the person or persons entitled to its custody or possession; but if not claimed by such person within sixty days, then to a public administrator, to be administered upon according to law.

SEC. 20. Any Medical Examiner who shall fraudulently neglect or refuse to deliver such property to such person within three days after due demand upon him therefor, shall be punished by imprisonment in the jail or house of correction, not exceeding two years, or by fine, not exceeding five hundred dollars.

SEC. 21. The Medical Examiner shall return an account of each view or autopsy, including his fees, to the county commissioners having jurisdiction over the place where the examination or view is held, or in the county of Suffolk, to the auditor of the city of Boston, and shall annex thereto the written authority under which the autopsy was made. Such commissioners or auditor shall audit such accounts and certify to the treasurer of the commonwealth, or the treasurer of the county, as the case may be, what items therein are deemed just and reasonable, which shall be paid by said trasurer to the person entitled to receive the same.

SEC. 22. Whenever any sheriff is a party to a suit or proceeding, or otherwise disqualified to act therein, the sheriff or deputy sheriff of any adjoining county may serve and execute all writs and precepts which he is disqualified to perform, and may serve and execute all such writs and precepts wherein any county, town, parish religious society or school district is a party, or interested,notwithstanding he is at the time a member of such corporation.

SEC. 23. Whenever a vacancy occurs in the office of sheriff in any county, the senior deputy sheriff in service, shall perform all the duties required by law to be performed by the sheriff, until the office of sheriff is filled in the manner required by law, giving bond as now required by law of sheriffs. And in case of such vacancy, the deputies of the sheriff vacating the office, shall continue to have and exercise the power of deputy sheriffs until said office is filled as atoresaid.

SEC. 24. Merely consists in the substitution in acts of previous years for the word "*coroner*," the words "*medical examiner*," and in the repeal of other inconsistent acts.

SEC. 25. Provides for the time of the taking effect of this act."

In respect to this law, the following comments are instructive: The Massachusetts Medico-Legal Society declares that "the law as it stands works *efficiently* and *satisfactorily*, both

to the public and to the officers themselves, except in some minor points," and calls attention to the six following minor defects, viz.:

"1. The law does not clearly define under what circumstances, and at whose summons, the Medical Examiner [*i. e.*, the former coroner] shall feel bound to make a view and inquest.

"2. It does not allow a sufficient mileage fee.

"3. It does not establish uniform fees for medical witnesses in the different counties.

"4. It does not make evident the object for which the witnesses to an autopsy are summoned, and so determine their character.

"5. It does not insure uniformity of blank forms for accounts, by ordering their issue under the authority of the State, instead of, as at present, under authority of the several counties.

"6. It does not provide compensation for extra duty performed by the Medical Examiner, or for him by others, in the care of the body."

The Secretary of the commonwealth of Massachusets testified February 3d, 1881, as follows:

"I believe that the Suffolk County [Boston] returns show a saving in expense of about one third, under the new law providing for medical examiners, and it is fair to presume that a similar result has obtained throughout the State. *The operations of the law have been satisfactory in the extreme,* so far as I have been able to learn."

As a final comment, it should be remembered that this satisfactory and economical law requires neither new officers nor salaries.

X. Medical Expert Testimony.

All authorities on this subject, whether medical or legal, have long united in denouncing the inefficient methods, perpetuated by Anglo American laws, for securing the "best attainable evidence" respecting the *opinions* of *skilled* witnesses, in reference to the *conclusions* which medical science may be justified in drawing from the medical *facts* in the case. Under our laws, not only are plaintiff and defendant permitted to summon such expert witnesses as each may see fit, as each may find susceptible to prejudice and even to bribery, but also to summon so-called experts, who, notoriously to their own profession, are *not experts* in any proper sense of the word. The inevitable result is that nearly every great trial, whose issue depends on the evidence of medical experts, brings to light proofs of scandalous partisanism on the part of these witnesses, and disgraces the science of medicine as well as of law. Although this evil has been often and justly denounced, and although many remedies have been proposed, it is none

the less true that neither Great Britain nor any one of the United States have yet succeeded in adopting any remedy for the evil. It would seem idle to hope that Louisiana could now accomplish that which States, far in advance of it in State Medicine, have thus far failed in. None the less, it may not be amiss to disseminate information, and to promote discussion on this subject, by appending, probably the best law yet proposed as a remedy for a grave and notorious evil. It has been recommended by the Massachusetts Medico-Legal Society, and is as follows:

"AN ACT in relation to Medical Expert Testimony.

Be it enacted, etc.

SECTION I. In any action, suit, or proceeding, civil or criminal, in which the testimony of a medical expert witness is desired by the parties, they may at any time before the trial file in the clerk's office a written agreement that such witness shall be summoned, designating him by name if agreed upon. The clerk shall thereupon issue a subpœna to the person designated, to be served in the manner provided by law. As soon as may be, after the service thereof, the witness shall make such examination of the case as may in his judgment be necessary and practicable, and he shall attend as commanded in the subpœna and answer such questions as may be put in relation to the case.

SEC. II. If no person is designated by the agreement of the parties, the court, or any judge thereof in chambers, or in vacation, in any county, upon the filing thereof, shall designate a proper person, learned in the science of medicine, to be summoned as such expert witness, and the clerk shall thereupon issue a subpœna as hereinbefore provided. If the parties do not agree that a medical expert witness shall be summoned in the case, the court, or judge, upon motion of either party and upon hearing, may determine the question and may designate the person to be summoned, if any, as hereinbefore provided.

SEC. III. Such witness shall be paid for his attendance, travel, and services a reasonable compensation, to be allowed by the court and to be paid out of the treasury of the county. For all civil actions and proceedings the defeated party shall be liable to refund the amount so disbursed; and after final judgment an execution may issue against him therefor, in favor of the county commissioners.

SEC. IV. For any case, the court, upon its own motion or for cause shown, may order more than one, and not exceeding three persons, to be summoned as medical expert witnesses; and such additional witnesses shall be designated and summoned, and shall perform the same services and receive the same compensation as hereinbefore provided.

*[SEC. V. For any criminal proceeding the defendant may call and examine other medical expert witnesses in addition to those hereinbefore provided for, but at his own cost; and in such case other medical expert witnesses may be called and examined in behalf of the commonwealth]

SEC. VI. No medical expert witness shall be admitted to testify before any court or magistrate except as hereinbefore provided."

XI.—PUBLIC INSTITUTIONS FOR THE SICK AND THE INFIRM.

It is much regretted that although three members of this society were appointed a sub-committee to report on this subject, and although they accepted the appointment, yet not one of the three made any report whatever. However, the chief evils from which these institutions suffer, and also the remedies therefor, are of ancient date and well understood. The two principal needs are, funds adequate for their proper maintenance, and competent as well as experienced officers,—who can never be permanently secured as long as their appointment and continuance in office depends in any wise on partisan politics. It is monstrous, that even the chief of a charitable institution should depend, for his appointment to office, upon the political support he may have given to this or that candidate.

The following facts, derived from official reports, are instructive and deserve consideration.

A.—State Insane Asylum at Jackson.

The administrators "call particular attention to the building as being inadequate to the demands for admission; that there is room only for 160 patients, while the average annual attendance is 213." This want of accommodation is seriously felt, especially by New Orleans, since it is thereby forced, at its own expense, to provide for patients who should be sent to Jackson, and be provided for by the State. The Superintendent, Dr. Jones, hopes that this defect will soon be corrected, inasmuch as he has been empowered to make enlargements which will meet all demands. "J. W. Jones, Secretary and Treasurer," reported to the Governor, September 25th, 1880, the following, among other facts: "I would particularly call your attention to the growing disposition, on the part of parish authorities, to get rid of those who become a public charge or a nuisance, by sending them to the Asylum Idiots, incurable epileptics, and persons in a state of senile dementia have

*SEC. V. Is inserted only to meet the possible objection of the unconstitutionality of the bill in its application to criminal cases.

been interdicted and ordered here by the courts, until the population of the institution is largely composed of these classes. I submit that such persons are not proper subjects for treatment in an insane asylum. An idiot child sent here in good health will probably spend a long life in the institution, to the exclusion of many patients for whom the institution was designed."

B.—Insane Asylum, City of New Orleans.

The Grand Jury, Mr Phil. Buchanan, foreman, reported July 31st, 1880, as follows, respecting the City Insane Asylum:

"Looked upon as an institution, the place is not a success. Compared with the asylum at Staunton, Va., it would not rank fifth in class. Placed by the side of those in Philadelphia, in Boston and on Blackwell's Island, it would sink into insignificance. Considered as the result of a herculean effort on the part of New Orleans, it is somewhat creditable. As far as food, clothing and shelter are concerned, the inmates are well provided for. Medical attendance is furnished weekly, but we fear the duties of the city physician are too multifarious to admit of his devoting enough attention to the treatment of insanity.

There is room for improvement in many respects. The building is not suitable for the purpose. The distribution of the interior should be arranged on an entirely different plan. Special provision should be made for curable cases. Cells with cushioned walls and floors should be constructed for the safe keeping of violent lunatics. All that science has accomplished, in its investigation of mental diseases, should be made available by employing eminent medical talent whose specialty is insanity.

In fact, if we were to go on and enumerate all that was needed in order to have the institution attain a slight degree of excellence, we would only attract attention to the financial embarrassment of the city and put New Orleans on record as being in this, as in all things else relating to the life, comfort and happiness of her people, about fifty years behind the age."

Commenting on this and other evidences of municipal mismanagement, this same grand jury teaches certain lessons, which are so suggestive in their application to the causes which retard the progress of State Medicine, that their quotation will aptly serve to close this report. "If honesty and good government flourish, it is because they are the reflex of a healthy public sentiment; the reflex of the separate moral conditions forming the aggregate known as the body politic. And this healthy sentiment, carrying strength and integrity with it, finds its manifestation in creditable institutions and honest government.

If, on the other hand, corruption raises its head, and be-

comes potent in defeating the ends of justice; if demoralization takes the place of integrity, and apathy appears where activity formerly was; if vigilance gives way to indifference, and the conduct of public servants is allowed to go unscrutinized; if public credit ceases to be sacred, then what conclusion are we forced to reach? Are we not compelled by the logic of the situation to point to the effects we have seen and connect them with the unworthy behavior of an unworthy people?

Are we not constrained to regard them as turbid streams flowing from an impure fountain head? Are we not called upon to acknowledge against our will that the people form this source, and that so long as its waters are darkened by the shadow of their own corruption no process of purification will be of any avail unless it springs spontaneously from within, unless conditions are changed, unless the people resolve to elevate and improve themselves by their own free and independent individual action."

ADDRESS

BY

HON. THOS. J. SEMMES, the Annual Orator for 1881.

Gentlemen of the Louisiana State Medical Society:

Article 178 of the Constitution of 1879, is the subject of my discourse; that article declares that—

"The General Assembly shall provide for the interest of "State Medicine in all its departments, for the protection of "the people from unqualified practitioners of medicine, for "protecting confidential communications made to medical men "by their patients under medical treatment, and for the pur-"pose of such treatment, and for the establishment and main-"tainance of the Board of Health."

This article manifests on the part of the people of the State dissatisfaction with the condition ofthings existing prior to 1879 in regard to State Medicine, and hence the mandate imposing the duty on the General Assembly to provide "for the pro-"tection of the people from unqualified practitioners of medi-"cine."

The General Assembly which was convoked by the Constitution for the purpose of passing the necessary laws to carry into effect its various provisions, overlooked or neglected article 178; this neglect may be attributed to the fact that the importance of the article was not appreciated by those who prepared the index to the printed pamphlet containing the

constitution issued by order of the Convention for distribution among the people; that index gives no clue to the existence of any constitutional provisions respecting State Medicine.

It becomes therefore the duty of the medical profession, aided by those who take an interest in the promotion of real science, and in the protection of the people from the evils of quackery, to see to it, that the General Assembly at its next meeting shall take into serious consideration the subject of State Medicine, and by the enactment of proper legislation secure the community from the impositions of unprincipled knaves, and the mistakes of honest ignorance.

Considering the importance of the subject, and the difficulty of dealing with it, and the greater difficulty of overcoming ignoble prejudices against those who, in fact, consult the public welfare in seeking to elevate the standard of science, required of medical men, to whom the health and lives of the people are intrusted, the first element of success is union of the medical profession in support of a practical scheme.

This union is to be accomplished through the efforts of this society, and then the plan being agreed on all the medical men of the State in good standing should be invited to co-operate in inducing the General Assembly to adopt it. Unless comparative unanimity in support of the plan can be obtained, the prospect of influencing the legislative mind will not be flattering. But a temporary check should not discourage persistent effort to accomplish the object in view.

The Medical Society of Alabama commenced the agitation of this subject in 1871, but no plan received the assent of a decided majority of that Association until 1874, and the adoption of it by the Legislature, after active opposition, was only secured in 1877.

No plan will succeed which excludes homeopathy, or any other pathy, dogma or hypothesis; no theory should be established by law, nor should any theory be proscribed, for, the rapid progress of science furnishes adequate security against the prevalence of erroneous theories; and a theory established by scientific investigation needs no law to maintain it.

This principle will bring to the support of the plan, which may be adopted by the society, all reputable physicians of every school, regardless of theraputical dogmas.

The principle constituting the foundation of any reasonable plan is the ascertainment of some legal mode that the person who professes to practice medicine is reasonably well educated in his native language, so as to be capable of understanding other persons correctly, and of expressing clearly his own ideas, and that he has reasonable acquaintance with the accepted sciences supplying the basis for medical knowledge and practice.

This ascertainment can be secured only in two modes:

1st. By subjecting the applicant to an examination.

2d. By accepting the diploma of a medical institution as evidence of fitness.

The latter mode is the only one now recognized in this State; it was enacted in 1861, and has been continued in force ever since.

There exists a very wide distrust of medical institutions in this country, because degrees are conferred on very easy terms, and in a number of instances there has been a direct sale of diplomas as recent developments in Philadelphia attest. It was this unsatisfactory condition of affairs which induced the Legislature of New York to change the law of that State last year.

The fourth section of the act passed by the Legislature of New York, on the 29th of May, 1880, provides, "that a person coming to the State from without the State, may be licensed to practice physic or surgery, or either, within the State, in the following manner:

"If he has a diploma conferring upon him the degree of doctor of medicine issued by an incorporated university, medical college or medical school, without the State, he shall exhibit the same to the faculty of some incorporated medical college, or medical school of this State, with satisfactory evidence of his good moral character, and such other evidence, if any, of his qualifications as a physician or surgeon as said faculty may require. If his diploma and qualifications are approved by them, then they shall endorse said diploma, which shall make it for the purpose of his license to practice medicine and surgery within this State, the same as if issued by them. The applicant shall pay the dean of said faculty the sum of twenty dollars for such examination and endorsement."

It will be observed, that the Statute just quoted authorizes the medical faculty, to which a diploma is submitted for approval, if not satisfied with the diploma, to ascertain the qualifications of the applicant by other means.

The State of New York has therefore adopted the principle that its own medical institutions shall be guardians of the public, and shall constitute medical boards to protect the avenues of the profession from access to the unworthy and incompetent.

It has in fact, committed to the medical profession of the State the charge of taking care that the people suffer no detriment from unqualified practitioners of medicine.

This is a step in the right direction, but it does not seem to be the intention of the statutes of New York to do more than provide a means for the *visé* of a diploma or other evidence of qualification exhibited to the medical institutions of the State. The language of the statutes does not authorize an examination of the applicant to ascertain his qualifications, it provides merely for an endorsement of the genuineness and respecta-

bility of the diploma exhibited. Such an endorsement is nothing more than the expression of opinion that the certificate or diploma produced, emanates from a medical institution of good reputation; it is no evidence that the possessor of the diploma has in fact the qualifications which the possession of the diploma ought to imply.

The distrust of medical schools is such that there is a feeling that the licensing of medical men ought not, as a general rule, to be in the hands of those who educate them.

The system of visćing diplomas practically leaves the licensing of a physician to any medical college in Europe or America; such a system is no cure for the evils which afflict society.

Therefore, the only effective safeguard for the community and the only mode of accomplishing the regeneration and purification of the medical profession in this State is to invest the Medical Department of the University of Louisiana, the only medical institution established and fostered by the State, with the power to *visé* all diplomas issued by medical schools out of the State and to prescribe the character and amount of the qualifications which shall entitle any one, other than the graduates of the University, to practice medicine and to ascertain by examination of the applicant, whether or not he possesses the prescribed qualifications.

The history of medical affairs in this State justifies the assertion that any other medical examining board will not accomplish much good.

In 1808 the law required the applicant to exhibit his diploma to the Mayor of New Orleans, who was empowered to appoint four physicians to examine him in public.

This was superseded in 1816 by an Act which created a Board of Examiners appointed by the Governor, composed of four physicians and one apothecary; the candidate was examined in the presence of the Mayor and two Aldermen.

The Act of 1816 was modified the following year by the creation of two boards of examiners, one for the Eastern Judicial District; the State at that time being divied into two Supreme Court Districts.

The Acts of 1820 repealed the provision as to examination of the applicant in the presence of the Mayor and two Aldermen, and required the Board of Examiners to admit to the practice of medicine any person of good character, who had obtained a diploma from any medical college in the United States.

In 1840 the law was again changed, and all candidates, save the graduates of the University of Louisiana, were required to have a diploma, and to undergo an examination before the Board of Examiners.

This system continued in operation until 1852 when it was repealed, and the possession of a diploma issued by any medi-

cal college in the United States authorized any one to practice medicine; no *vise* of any kind was established.

When the two boards authorized by the act of 1816 were in existence, the law was not enforced in the Western District because the board was composed of physicians residing at a distance, and it was almost impossible to get a sufficient number of them together to form a quorum to grant licences.

In the Eastern District the statute became a dead letter from the supineness of the medical board and the general negligence of the entire body of the medical profession. These facts have been ascertained from the medical journals of the time during which examining boards were in existence, and they convey two lessons.

1st. That there should be but one Board of Examiners for the whole State; one central authority established in New Orleans.

The facilities for travel in another year will be so great that distance will offer no impediment to the practicability of the plan.

2d. That reliance for the enforcement of the law on this subject cannot be placed on the medical profession at large, or boards composed of physicians acting and exclusively engaged in the practice of medicine. Inertness, indisposition to act the part of informer, delicacy of feeling, and unwilingness to be subjected to suspicions of jealousy, and other similar causes have heretofore prevented, and will again prevent, the body of the medical profession from participating in the enforcement of laws regulating the practice of medicine.

I therefore suggest the adoption of the principle that the agency of the medical institutions of the State be used to make the requisite examinations, and to supervise the enforcement of the law.

In New York this principle has been applied to the *visé* of diplomas.

In Alabama the State has entrusted the entire control of the subject to the State Medical Association, and to County Medical Societies in affiliat on with and chartered by it.

We have in this State as yet no medical organization sufficiently extended to render the Alabama plan effective or practicable.

The composition of the Board of Health and its political character forbid the employment of that agency to make the examination of candidates for admission to the medical profession, or to enforce the law against unqualified practitioners.

The Medical Faculty of the University of Louisiana, is the only available legal organization in the State, competent by its corps of professors to examine applicants for a license to practice medicine and it should have sufficient interest in the profession and in medical education to become with the aid of

this Association, a most efficient supervisor of the execution of any law enacted by the Legislature on the subject of State Medicine.

It is true, that a board of examiners appointed on the recommendation of this Society, with sufficient salaries to secure the services of competent men, might be more satisfactory; but in the present condition of the State Treasury, no one can expect the establishment of such a board; and no reasonable fee to be paid by the candidate would suffice for the creation and maintenance of a compensation fund to be applied to the payment of the Board of Examiners.

Therefore, it is that I have suggested the Medical Faculty of the University of Louisiana, as the only practicable agency in the State, through which any reform can be accomplished. If there were other established and respectable medical institutions in our midst, they might be embraced in the scheme so far as examinations are concerned, but there are none.

No one is allowed to practice law in this State until he has passed an examination before the Supreme Court. The only exception to the rule, is that of a graduate of the University of Louisiana; a diploma given by the Law Faculty entitles the graduate to admission to the bar. Inferior courts have no authority to examine those who desire to enter the legal profession. No one complains of this system and I believe it has given universal satisfaction. It is true that in 1868 a law was enacted, allowing persons who had been admitted to practice at the bar of the highest court of any State, to practice before any court of this State; and in 1873 this privilege was granted to any American citizen who had been admitted to practice law in the Superior courts of France, England and Germany, and who had qualified in any legal institution of learning in any of those countries. But in 1877 all these exceptions to the rule of examination by the Supreme Court were repealed, and that court was not allowed to examine any person who had not pursued the study of law for a period of two years under the direction of a respectable lawyer of this State.

Medical men have no Supreme tribunal similar in nature to the Supreme Court of the State; they practice in the sick room, and on individual patients, and there is no appeal from the judgment of the medical man, or his prescriptions however erroneous. It is for this reason the public as well as the profession have so profound an interest in elevating the standard of medical education, and providing means for the exclusion of unqualified persons from the practice of medicine.

Power to do good must reside somewhere; an abuse of power is incident to the exercise of it, and therefore no human law is either perfect in itself, nor is the power conferred by it

always exercised to promote the objects for which it is conferred. It is therefore no argument against any system or scheme that there may be abuses;—the question to be solved is whether on the whole the proposed legislation will not promote the interests of the public, and whether the inconveniences or ill-effects of an abuse of authority are not largely counter-balanced by the good results expected to be produced.

Whatever may be thought of the plan I have ventured to suggest and advocate, it is the best that some considerable reflection on the part of a layman could devise, and if you approve it, I have prepared the draft of a bill to enable you to present the scheme to the legislature in proper shape for its enactment as a law. I will now read it for the information of the association; it is intended to be an additional section to the bill, which has been proposed, providing for a system of registration of all licensed physicians and surgeons:

SECTION —. *Be it further enacted, etc.*, That on and after July 1, 1883, the Medical Department of the University of Louisiana, shall not certify or endorse any diplomas emanating from any medical institution located out of the State of Louisiana, except on examination of the qualifications of the applicant who desires to become a registered physician or surgeon; such examination may be oral or in writing, or partly oral and partly in writing, according to rules to be prescribed by the medical faculty of the University of Louisiana; and shall embrace chemistry, and toxicology, anatomy, physiology, the practice of medicine of surgery and of obstetrics, materia medica and therapeutics; provided, that if the applicant proposes to practise as an eclectic or homœopathic physician, he shall not be rejected on account of his views or opinions or dogmas on therapeutics or any kindred subject; it being the intention of this act to confine the examination to the generally accepted sciences supplying a basis for medical knowledge and practice, irrespective of the school to which the applicant may belong, whether it be regular, homœopathic or eclectic.

If such examination be satisfactory to the said faculty, there shall be endorsed on the face of the diploma of the applicant the words "Examined and certified according to law," which endorsement shall be dated and signed by the Dean of said Faculty, or some other officer thereunto authorized by said Faculty.

Provided, that no person shall be examined until he has furnished to said faculty satisfactory evidence of his good moral character.

All persons whose diplomas are thus endorsed as aforesaid shall be placed by said faculty on the list of registered physicians or surgeons, on their signing the register hereinafter mentioned, and without any further formality they shall be en-

titled to all the rights and privileges of registered physicians or surgeons.

A register shall be preserved of all diplomas thus endorsed and certified with the full name of the person examined, his age, birth place, residence, and the places where he has practised, which register must be signed by the person examined, and until so signed, he shall not be considered a registered physician or surgeon. The said faculty shall be entitled to a fee of twenty dollars for each examination, to be paid in advance by the applicant.

REPORT OF THE CORRESPONDING SECRETARY.

S. S. Herrick, M. D.

It being made my duty, by the regulations of this Society, to prepare a classified register of all the medical practitioners in the State, and also obtain particulars of the several parish societies, for the purpose of rendering a report at the annual meeting, I have used diligence to comply, and present herewith the following tables as the substance of the report. The points of information have been obtained partially through the Vice Presidents, according to our regulations, but chiefly by correspondence with physicians throughout the State. Circulars have been sent to one or more physicians in all the parishes, and reports have been obtained for 47 out of the 58 altogether. It is probable that several more may be heard from before the publication of the transactions of this meeting.

The returns for the parish societies are very defective and unsatisfactory, and they indicate a general lack of organization among the medical men of our State. This want of coöperation is clearly the cause of the depreciation of the value of our services to the community and of the insignificant part played by us in public affairs. As the remedy is within the reach of willing hands, no one who holds back from active membership in a local society has any right to complain.

With these observations the tables are respectfully submitted.

Table of the Local Medical Societies in Louisiana.

Parishes.	Names of Societies.	When Founded.	Meetings Held.		No. of Mem'rs	Principal Officers.		Remarks.
			Where.	When.		President.	Secretary.	
Ascension.	Ascension Medical Society.	1879.						No report. Probably defunct.
Avoyelles.		1878.						Remained active only a few months
Bienville.	Bienville Medical Society.	May, 1878.	Sparta.	Sec. Saturday, June, Sep, Dec. and March.	9	F. Courtney, M. D.	T. J. Fouts, M. D.	
Caddo.	Shreveport Medical Society.	January, 1866.	Shreveport.		21	Dr. T. G. Ford.	Dr. H. C. Coty, Rec'g. Dr. T. J. Allen, Corres'g.	
E. Baton Rouge	Medical Association of Baton Rouge.	1874.	Baton Rouge.	Monthly.				No report for '80.
East Feliciana.	East Feliciana Medical Association.		Clinton.					Supposed to be defunct.
Grant.	Red River Medical Association.	1877.		Quarterly.				No report for 1880. Probably defunct.
Attakapas parishes.	Attakapas Medical Association.	1879.	In the different parishes.	Semi-annually.	21	Dr. A. Maguire.	Dr. L. G. Blanchet.	
Iberville.	Iberville Medical Association.	March, 1878.	At call of President.	At call of President.	6	Dr. J. P. R. Stone.	Dr. A. B. Snell.	
Lafayette.	Lafayette Med. Soc'y	1877.						Rep'd as defunct.
Madison.	Madison Par. Medical Association.	1880.	Tallulah.	At call of President.	9	Dr. Geo. T. Trezevant.	Dr. Wm. Kelly.	
Orleans.	Orleans Par. Medical Society.	April, 1878,	University of Louisiana.	Monthly. Last Monday.	46	Dr J. P. Davidson.	Dr. P. B. McCutchon, Rec. Dr S. S. Herrick, Cor'g	
Orleans.	New Orleans Med. and Sur. Association.	December, 1873.	Cor. of Camp and Natchez.	Saturday evenings, weekly.	About 45.	Dr. J. P. Davidson.	Dr. M. Levy.	Has not adopted Code of Ethics.
Plaquemines.	Plaquemines Par. Med. and Sur. Association.	1875.	At call of President.	At call of President.	9	Dr. J. B. Wilkinson.	Dr. G. A. B. Hays.	
Pointe Coupee.	Med. Asso'n of Par. of Pointe Coupee.		New Texas.	Irregularly.	7	Dr. Peter Randolph.	Dr. A. Tircuit.	
St. Landry.	St Landry Medical Society.	About 1871.	Opelousas.	Irregularly.		Dr. V. Bougni.	Dr. Jas. Ray.	Partially disorganized.

Classified Table of Physicians in the several Parishes of Louisiana.

Names of Parishes.	Total No.	Regular.	Unknown or Doubtful.	Irregular.	Came in 1880	Removed in 1880.	Died in 1880
Ascension	12	10	2			1	
Assumption	15	13	2				
Avoyelles	20	18	2				
Bienville	15	13		2			
Bossier	16	16			2	1	
Caddo	32	30		2	3	2	1
Calcasieu	8	8					
Caldwell	8	7		1			
Cameron	4	2	1	1			
Catahoula	9	7		2			
Claiborne	19	16	3				
Concordia	5	4	1		1		
DeSoto	22	21		1			
E. Baton Rouge	24	22	1	1			
East Carroll	10	9	1				
East Feliciana	18	18					
Franklin	9	7	2				
Grant	8	4		4	2		2
Iberia	13	10	3				
Iberville	11	9	2			2	
Jackson	8	6	1	1		1	
Jefferson	5	3	1	1			
Lafayette	18	15	1	2			
Lafourche	10	9		1			
Lincoln	9	9					
Livingston	6	3		3			
Madison	11	9		2	1		1
Morehouse	18	14	2	2		1	
Natchitoches	22	17	2	3			1
Orleans	246	186	21	39	17	23	5
Ouachita	13	13			1		
Plaquemines	12	9	3		2	3	
Point Coupee							
Rapides	11	10	1			1	
Red River	7	5	1	1			
Richland	13	13					
Sabine							
St. Bernard	1	1					
St. Charles	3	1	1	1			
St. Helena	8	6	1	1			1
St. James	9	6	2	1			1
St. John Baptist	3	3					
St. Landry	30	27	2	1			1
St. Martin	10	7	2	1			
St. Mary	17	16	1				
St. Tammany	6	4		2			1
Tangipahoa	7	5	1	1			
Tensas	13	12		1	2		1
Terrebonne							
Union	17	10	2	5			
Vernon	6	5		1			
Vermilion	9	6	1	2	2	1	
Washington	4	2		2			
Webster	10	7	1	2			1
W. Baton Rouge							
West Carroll	4	4				2	
West Feliciana	12	10	2			1	2
Winn	13	4		9		1	
Total	869	701	69	99	33	40	18

TREASURER'S REPORT.

GEO. K. PRATT, M. D.

NEW ORLEANS, La., March 30, 1881.

TREASURER, in account with the LOUISIANA STATE MEDICAL SOCIETY, from March 30, 1880, to March 30, 1881:—

DR.

To balance brought forward from last year, as per report	$ 96 85
To cash received from fifty-five members	275 00
To cash received from Parish Medical Society	80 00
Total	$451 85

CR.

By expenses to March 30, 1881	$398 45
By balance on hand	53 40
	$451 85

DIAGNOSIS OF YELLOW FEVER FOR SANITARY PURPOSES.

S. M. BEMISS, M. D.

Proper diagnoses of cases of sickness are important to the successful achievement of several different purposes.

First—The medical practitioner strives to make a proper diagnosis, in order that he may found his treatment on a correct estimate of the nature of the case.

It is however, very well understood in the profession, that the practitioner is often able to make very judicious prescriptions before he is qualified to announce the name of the disease from which his patient is suffering. We learn to prescribe for morbid conditions withso much aptitude, that we do not defer action until we can give cases their substantive assignments in nosological classifications. Indeed, it occurs not uncommonly, that cases are prescribed for, and w sely too, throughout their whole careers, and yet their diagnoses remain undetermined. Under these circumstances responsibility for positively correct diagnosis is very lightly estimated, for, in medicine, as in war, the assailant who is able to vanquish his enemy is held to have a knowledge competent for the purpose.

Second—A physician seeks to make correct diagnosis of his patient's disease merely for scientific purposes. He may do this for the gratification of his own love of scientific exactness, or he may wish to record his cases for the benefit of the

profession at large. In either case, no conclusions should be reached or announced, which are not based upon unassailable evidence. Of course, I am understood to speak humanly. Unassailable evidence in medicine does not imply absolute truth, but every possible care should be exercised to secure the greatest attainable exemption from error. One may well hazard the declaration, that errors inscribed on the pages of medical annals are less to be condoned, than those which find their way into ecclesiastical writings. In theology there is a machinery provided through means of which, errors of doctrine or of fact can be atoned for; but in medical science they are unrecallable and irreparable. The whole world-wide profession is our only tribunal, and culprits well understand that they and their offences are liable to be lost sight of in so vast a court.

Third—It is important that all cases of infectious or spreading diseases should be diagnosed correctly and promptly. The aims and purposes of preventive medicine are altogether defeated by failure to recognize certain of these diseases—yellow fever for example, before their infections are so distributed among the population that further spread cannot be prevented by isolation. We are all aware of the great difficulty oftentimes experienced in diagnozing the first cases of yellow fever which occur in a community. There are very few situations more embarrassing to the physician than to be placed in doubt respecting the diagnosis of a case which may or may not prove to be yellow fever, certainly none more mortifying than to declare a diagnosis which is not only erroneous, but which is an error sadly injurious in its results to the community in which it occurs.

In order that our profession may be brought to a common understanding in respect to some mode of conduct, by which these difficulties may be surmounted without consequent injury to sanitary interests, it is proposed that we agree that certain symptoms when associated in a given case, shall justify us in calling that case yellow fever until we have sufficient authority to pronounce otherwise. We say therefore, that this diagnosis is for sanitary purposes,—that is, we conventially-agree that a certain formula of symptoms shall so far represent yellow fever, that the patient shall be isolated and kept in close surveillance until a true verdict can be rendered. I seriously believe, that the adoption of some schedule like that which is presented in this paper, will greatly advantage public health, and at the same time relieve the physician of that great trial and responsibility, which devolve upon him when alone and unsupported, he has to meet the terrible odium of striving to speak the truth, when and where truth is neither desired nor expected.

But this idea of establishing fixed rules for diagnosing infectious diseases for the purpose of limiting their spread is by no

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means a new one. The Jewish laws, while that people lived under the Theocracy, described with great particularity appearances which justified the priests in declaring a case of skin disease to be leprosy. After reading the 13th Chapter of Leviticus we are compelled to admire that system of sanitary laws which placed before sanitary officials a diagnosis of leprosy for purposes of prevention.

I need not introduce any argument to show that it is the duty of all physicians to support every wise measure, having for its object the prevention of disease. Every member of the medical profession, by virtue of his calling, is enlisted as a sanitary officer and assumes the position and responsibility of an active worker in preventive medicine. We all recognzie our *ex-officio* obligation to oppose every possible obstacle to the spread of disease, and when a physician is called to a case of yellow fever, the first question, of course is, what attentions are requisite for the cure of the patient? After that, how may the spread of the disease be arrested, and others be protected from attacks? One important end to be gained by adopting some such scheme as that proposed is, that when the individual practitioner acts within its prescription, he can rely upon the countenance and support of the profession around him.

But it may occur that certain members of our profession are placed under obligations particular, and additional to those common to their brethren, on account of holding the position of a sanitary officials.

Whenever a person assumes the responsibility of becoming a custodian of public health, he assumes special duties, consisting chiefly, in timely recognition of the approach of dangerous diseases, and in giving due warning to others. Every loyal soldier feels it his duty to warn his army of the enemy's approach, but the sentinel on outpost service, is not pardonable if he fails to know of the impending attack, or to sound the alarm at the earliest moment after being apprized of danger.

In relation to yellow fever, which more especially concerns us in this State; the interests of sanitary science,—which are to us precisely synonymous with the claims of sacred and inexorable duty, require us to perfect and announce the diagnoses of the first cases as early as possible. But, as has been previously stated, it is very well understood that the first cases which appear in a community, often present great difficulties of diagnosis. It sometimes occurs that these difficulties are not removed until after the accumulated observations of several days. Under these circumstances the cases are classed as "suspicious." This term is greatly objected to in certain circles, but I know of no other word proper to be substituted. A recent traveler affords some amusement to his readers, and an apt illustration for my purpose, when he describes the solicitude and alarm he suddenly experienced, after catching

the tail of a large serpent to draw it from its hole lest the reptile might prove to be venemous. It was not until the head was exposed that his fears were allayed. The traveller had caught hold of a snake doubtful and supicious in character. Each one of us who suspects his patient's case to be the first one of yellow fever in his community, is in a similar dilemma, he may be said to be drawing a suspicious snake from its hole.

To meet these doubtful or suspicious cases, the scheme of diagnosis of yellow fever for sanitary purposes includes a formulation of symptoms and influencing circumstances, which shall justify a suspicion of yellow fever. The principle involved in making doubtful or suspicious cases of fever objects of sanitary attention, is of paramount importance in preventive medicine. The sanitarian first wishes to learn if there is a reasonable ground upon which to base a suspicion respecting the nature of the case. If he decides this question affirmatively, he proceeds at once to isolate the patient, and to put in practice every available means which will afford protection against spread. In other words, he gives the cause of human health the benefit of all doubt, and from a sanitary stand point he proceeds to fence the suspicious case around as though it had been decided to be yellow fever. It is easy enough to abandon these restraints when found unnecessary, but it is not easy to limit suffering and death should a different course be pursued. Pestilence like the cloud of the prophet, may at its beginning be not larger than a man's hand may cover, but if neglected, may reach boundaries too wide to admit of successful measures for restriction.

I am very free to acknowledge, that the position which I hold as a sanitary official, and my anxiety to discharge the duties of that office in an efficient manner, are motives which principally prompt me to ask my confrères to agree upon certain groups of symptoms which in preventive medicine shall be held to indicate yellow fever. It seems all the more important that some methodic arrangement of the character herein presented, should be recommended to official sanitary inspectors to assist them in the discharge of their delicate duties.

It will be readily apprehended that there is nothing in this proposed action designed to interfere with that right which every practitioner claims, to assert his own conclusions respecting diagnosis. A standard for diagnosis of yellow fever, so framed as greatly to lessen the danger of its spread, and framed for that purpose only, does not in any manner interfere with the private diagnosis, or the autonomy of any practitioner. The latter may allow, or even advise a patient to be isolated, as a matter of public safety, without any surrender of his own opinions respecting the character of the disease.

With these remarks, I beg to lay before you for your appro-

val, if considered wise to take such action, the following schedules of symptoms and conditions proposed to be considered a standard of authority in the diagnosis of yellow fever for sanitary purposes. My thanks are due to Prof. Chaillé, and to the Medical and Surgical Association for important aid in preparing this scheme.* Adopted without a dissenting vote.

I. For sanitary purposes the following groups of symptoms shall be considered to indicate yellow fever:

Group 1st.—A person after (a) a sudden attack, has (b) a fever of one paroxysm, attended with (c) marked congestion or blood stasis of capillaries of surface, conjunctivæ and gums; with (d) a history of probable exposure to infection, and (e) no history of a previous attack of yellow fever.

Group 2d.—A person after (a) a sudden attack, has (b) a fever of one paroxysm, followed by (c) unusual prostration, (d) albuminous urine, (e) yellowness of conjunctivæ, or skin, and having no positively authenticated history of previous attack of yellow fever.

Group 3d.—A person has (a) fever of one paroxysm, (b) albuminous urine, (c) black vomit, or (d) suppression of urine, (e) general hemmorhage tendency under (f) circumstances where exposure to infection is a possibility.

II. Suspicious cases of yellow fever for sanitary purposes. The following symptoms associated with a fever of one paroxysm in a patient who has apparently been exposed to infection and has never had yellow fever, shall be held to justify in either of the six following cases a suspicion of this disease, viz:

First, suddenness of attack either with violent pain in the head and back, injected eyes and face, or with marked congestion of the superficial capillaries.

Second, Want of that correlation between pulse and temperature usual to other forms of fever.

Third, Albuminous urine.
Fourth, black vomit.
Fifth, general hemorrhagic tendency.
Sixth, yellowness of skin.

The following cases shall also be deemed suspicious:

Seventh, Any case respecting which reputable and experienced physicians disagree, as to whether the disease is or is not yellow fever.

Eighth, Any case, respecting which efforts are made to conceal its existence, full history and true nature—in violation of Sec. 27, City Ordinance. June, 24, 1879.

* The Medical and Surgical Society voted to limit the operation of that part of the schedule which related to suspicious cases to time of year from May 1st to November 1st. This amendment was accidentally omitted from the paper as adopted by the State and Parish medical associations.

In the event of death of a suspicious case a post mortem examination should be made when practicable. Both before and after death, yellow fever is specially and pre-eminently characterized by the fact that it is *par excellence*, a hemorrhagic fever, marked by capillary congestion and its sequelæ; hence, post mortem evidences of a general hemorrhagic tendency in internal organs, especially in the digestive in preference to the urinary tract, shall be held to confirm the suspicion.

URINARY CALCULUS IN NORTH LOUISIANA.

By Dr. J. C. Egan, of Shreveport, Louisiana.

Mr. President and Gentlemen of the State Medical Society:

Thinking that it may not be uninteresting to your body, I present to you my experience of over thirty years in North Louisiana, on Urinary Calculus.

All the cases presented are from the district of country embraced between the Red and Ouachita Rivers and the Arkansas line.

Numerous spurs of the Ozark mountains here dip into Louisiana, producing an undulating country timbered with oak, pine, hickory, elm, walnut, gum and iron wood as the principal growth of the uplands, with numerous perennial streams of clear free-stone water running most generally in a southerly direction. Along the borders of these streams are found cypress, magnolia, bay, holly and gum. The principal undergrowth is witch-hazel. Numerous varieties of wild grape also abound. There are also found a large number of springs, whose waters contain most usually sulphate of iron as the principal medicinal agent, which have been resorted to for many years for their curative properties.

The rock formation of this region is iron boulder and sandstone. The soil, of remarkable fertility, is usually cultivated by small farmers.

As the water history of stone has for time immemorial attracted much attention, I give the preceding topographical description of this region.

Case No. 1: James Hillburn, aged 45 years, presented himself to me in March, 1851; married, a hard working farmer, native of Georgia, residing in Bienville six years. Had all the symptoms of gravel. Active diuretics were administered, which resulted in the expulsion per urethram of a mulberry calculus, jagged and rough, larger than the largest china berry. Had no return of trouble, and died in 1877 of pneumonia.

Case No. 2: Mrs. M. D. Lee, aged 46, a native of east Tennessee, but for many years a resident of the South; never bore children. Always had some menstrual irregularity, which she

persistently neglected. Under the influence of diuretics and anodynes, passed from 20 to 30 calculi from the size of a bird shot to a grain of corn, usually oblong and white and shining, as if varnished. These, upon testing, proved to be of phosphate of lime. Under nitric acid treatment, together with proper dieting, they ceased to form; but being an intractable patient, in time all precautionary means were discontinued, and she died no doubt from a reformation of calculi and consequent bladder trouble.

These are the two most prominent cases not requiring instrumental interference.

The first case requiring lithotomy was Robert Hill, residing with his grandmother, in Claiborne parish, La. Called to Robert in September, 1866; found him a poorly developed child of 9 years of age. A native of north Georgia. Had suffered from infancy with bladder trouble. Both parents died of phthisis. I performed lateral lithotomy, using Liston's staff and a common scalpel, assisted by Drs. Coon and Phillips, and extracted the specimen which will now be exhibited to you, and which you will readily perceive is of the mulberry variety, and much resembles a sweet-gum ball.

Case No. 2: Y. D. Allen, Jr., of Claiborne parish, La., aged 26. Recently married. He stated that in 1864, while riding a wild horse, he was thrown violently forward, the perineum striking on the horn of the saddle, producing an abscess which was opened by a neighboring physician, the instrument penetrating the urethra in the prostatic region, producing a permanent fistula. He soon began to suffer with symptoms of gravel, and was brought to me in October, 1873. I performed lateral lithotomy, using Liston's staff and the common scalpel, assisted by Dr. F. Courtney and Messrs. C. N. Ardis, G. D. Duke and John Brice. He recovered rapidly. The calculus, which will now be presented to you, I have not analyzed. This man made a rapid recovery and is now the father of two children; showing that the operation did not interfere with his powers of procreation.

Case No. 3: Herbert Adams, of Webster parish, La., aged 11, poorly developed, a native of Georgia, brought to this country in infancy. Was sent to me May 9th, 1880, by my friend, Dr. D. B. Hamilton, of Minden, Webster parish, Louisiana.

Herbert had bladder trouble from infancy. I performed lateral lithotomy the next day, assisted by Drs. Billieu, Ford, Allen and Turner, and in the presence of Drs. Gray, Hilliard, Lyon, Ashton, Cody and the resident students of the Shreveport Charity Hospital.

In this case I used the Parker staff, and after the external incision attempted to use the Blizard probe-pointed knife, but soon abandoned it for the scalpel. The stone, which will now

be exhibited to you, is the largest of the three operated for by me. This case made a slow but perfect recovery.

(I will here record my preference for the Liston staff and scalpel in this operation.)

These cases may be of interest, as showing how infrequent calculus formations are in North Louisiana.

In order to show still further the little liability to the production of calculus, I will state that, in the boy Herbert Adams, the catheter was left in the bladder for fourteen consecutive days without being roughened.

It may not be inappropriate to here record the case of Mr. F. Gatlin, a planter of Bossier parish, on Red River, who was brought to me May 12th, 1878, aged 27, married. History given by him of a stricture of ten years' duration, which had been variously treated; the most recent effort to relieve which had been the forcible passage of a sound into the bladder under chloroform. All attempts by me to introduce even a filiform bougie were futile. Extensive urinary infiltration of the perineum and consequent abscess rendered an operation necessary. Assisted by Drs. Billieu, Allen and Fisher, I made an incision in the median line of the perineum, Dr. Billieu holding a No. 6 silver catheter in the urethra firmly pressed upon the stricture. I with the aid of the left index finger guided the knife to the end of the catheter and divided the strictured urethra, which for 1½ inches was but little more than a cord. The catheter being gently pressed forward, was guided by my finger into the unstrictured urethra and on into the bladder, where it was allowed to remain for twenty-one consecutive days, and on removal it had not the slightest roughness. In this case counter openings in both buttocks were made, in order to drain better the abscess. The patient made a perfect recovery, and I have since passed with ease a No. 14 American scale sound. In this case I had throughout the whole progress of the case the valuable assistance of my friend, Dr. D. H. Billieu.

It will be perceived that the case of Y. D. Allen is the only one which can be said to have originated in north Louisiana.

ON THE TREATMENT OF YELLOW FEVER.

By Richard H. Day, M. D.

Perhaps no subject within the domain of medicine has held such a prominent position in the public mind, and so earnestly engaged the attention of medical men within the last few years, as the disease called *yellow fever*, embracing its etiology, history, pathology and treatment. Such isits bearing upon the commerce and the material interests of civilized nations, as well as its drain upon human life, that it is not only of na-

tional importance, but cosmopolitan in its magnitude and character. What subject then, especially in Louisiana, is more appropriate to be brought before a State Medical Society for discussion, than *yellow fever?* Here we have become familiar with its visitations and types; here brought face to face frequently with this *fell destroyer* of human life, in its periodical ravages of our homes and hearths; and as medical men and practitioners of medicine, we should have learned more of its true character—if not its definite origin and cause, at least its pathology, and especially its correct treatment. In reference to its cause and origin, I shall have nothing to say. That matter is being closely investigated by very able *experts*, and I presume in due time Dr. Hargis and our friend Dr. Chaillé, with his learned associates, will definitly and correctly settle that point. It is the treatment of this disease that I purpose to discuss before this Society, because, after all, this is the one important matter, the sum and substance and culmination of all medical knowledge; or else it is not true, that "*the object and end of the healing art is to alleviate pain, cure disease and prolong human life.*"

It may seem presumptuous in one who has acquired his medical experience in rural districts and inland towns, to treat of any medical subject before the learned faculty of this great metropolis; but I beg leave to state that, though our experience may be less varied, yet as medical men, what we learn in the country, we generally learn well. Such is the weight of personal responsibility resting upon us, in every case of sickness, ror sugery, or obstetrics, that we are forced, "*per necessitate*," into the deepest interest and sympathy with our cases, calling forth every effort of thought and mind to consummate a successful result. We have not the numbers, the hurry and the rush of large cities, in which to hide our fatal cases, nor just and generous men of the medical faculty, to sympathize with us and share our responsibilities. We must face the scrutiny and meet the criticisms of the populace, and in too many instances the dark innuendoes of envious and narrow-minded physicians, and clearly demonstrate by our assiduous attentions and efforts, and our intelligence, that we have done our whole duty, done it wisely, and, gentlemen, done it "*secundum artem.*"

It is a matter of surprise as well as regret, that with the vast opportunities we have had of treating *yellow fever*, there should still exist so much discrepancy of opinion, so much uncertainty and so much of empiricism in its treatment. Indeed, in the last few epidemics we have had, it seems as if the profession had given itself over to a system of blind and reckless experimentation, naturally enough unsetting medical opinion, and creating confusion and distrust in its own therapeutical methods. One physician of much experience writes, "It has been my fortune to contend with numbers

of epidemics ever since 1839, and I do say in all seriousness, that so far as drawing my indications for treatment from the writings and observations of others, the effect of their teachings has been more to confuse and lead me into uncertainty than otherwise." Another physician, a leading and prominent member of the medical faculty of this city, long in active practice, and deservedly occupying a proud position among his peers, in 1878 announced, "that no system of treatment of yellow fever known to the medical profession was of any avail," and advised his fellow practitioners in every infected locality "*to go to experimenting.*" And this was heralded in one of your leading city papers as an item of information, to the regret and great mortification of the profession generally, I dare say. And under these surroundings, it is no wonder that whole communities and States become panic-stricken at an outbreak of this intractable pestilence.

Now gentlemen, it is just this system of doubting and *experimenting*—this search after specifics, instead of a common-sense rational treatment, that has made yellow fever an "opprobium medicorum;" that has given it a fatality that makes it the scourge and the curse of our tropical and semi-tropical countries. I assert, and I do it confidently, that it is amenable to proper treatment; that if correctly treated, and at the proper time, it would be less fatal than pneumonia, than scarlatina and a number of other common diseases, that spread no consternation when they occur; that it can be as safely and more quickly conducted to a favorable issue than pernicious, intermittent, remittent and continued fevers.

Basing my opinion upon my personal experience and observation of all our epidemics, beginning with the noted one of 1853, I should say the mortality *necessarily* attending these epidemics should not exceed, with the proper treatment, 3 to 5 in the 100 cases. That the average mortality is immensely above this ratio, our mortuary reports painfully demonstrate, and as clearly verify the fact, that the excessive mortality is due to a vacillating, hesitating and irrational mode of treatment.

I venture to assert that, if the common and ordinary modes of treatment in vogue in yellow fever epidemics were as rigidly applied to people in ordinary health, it would kill one in four, or invalid them for life. Just to think, in the height of our heated season, with the general outside temperature ranging from 85 to 95 degrees and up to 100, that a person stricken down with fever, after being placed in bed in a close and confined room, should be plied with hot mustard foot-baths, tucked under blankets three to five thick, drenched with hot teas, drugged with castor oil, the doors and windows closely barred to prevent the ingress of

fresh air, all cool drinks withheld, and perhaps smothered by an investing musquito bar. Can you imagine anything more irrational or opposed to the plainest dictates of common sense, or more likely to be disastrous in its results? Why, the vital forces are broken down and the nervous system shattered at the very threshold of the disease; and if the patient does not die, it is a providential escape from death, or due to an inherent strength of constitution, which would not succumb to bad treatment.

When the epidemic of 1853 first broke out in this city, I was living in the Teche country, in Pattersonville, about nine miles from Berwick's Bay; and being in regular communication with New Orleans, we had every reason to expect it would invade our section. To prepare myself as best I could to meet its outbreak, I opened a correspondence with some of my professional friends in this city, to learn the most successful plans of treatment in use by them. My friend, the lamented Dr. Fenner, sanguine and emphatic in his temperament, had espoused at that time the use of large doses of quinine, and accordingly wrote me: "Dr.: Should yellow fever visit your section, as no doubt it will, attack it by large doses of quinine; give not less than 20 grs. at a dose, and repeat it every few hours; it is the most successful treatment." Dear doctor; this was his hobby then, (as was the "chlorine mixture and tinct. veratrum viride" at another time) and sadly did it fail him, and others who relied upon it during the ordeal of that terrible season.

And wherefore these hobbies and these irrational modes of treatment; and the no less false and pernicious theory of the *self-limitation* of disease and the consequent absurdity of *nihilism* in treatment, so strongly put forth and advocated by learned professors and teachers in the science of medicine? While in every other branch of practical medicine—gynecology, obstetrics, operative surgery—embracing all their specialties, rapid strides in progress and improvement have been made, resulting in the great saving of human life and the amelioration of human suffering, in the practice of general medicine, I fear we have absolutely retrograded. And this is due to several patent causes: to an indolent or hasty habit in the observation of the phenomena of diseases; to the too common belief that every disease is a *distinct entity* and has its specific cure, and hence the routine treatment of disease by name; and lastly the fatal error of disregarding the facts and teachings of clinical experience, and taking up the assumed revelations of physiological research and experiment as the true basis of medication.

While we have learned much by these profound physiological researches—much which has added glory and dignity to our profession, as well as vast usefulness—much of which we are justly proud and grateful for; yet it is at the *bedside*, watch-

ing and interrogating nature in her diseased manifestations, carefully tracing the symptoms back to the pathological changes and functional disturbances producing them, and carefully noting the operation and effects of the different remedies used, and the conditions external and internal, modifying their action, that we can really, rationally, scientifically and usefully perform our duties as practitioners of medicine.

You will readily perceive from the foregoing views expressed, that, in the treatment of yellow fever, I have no *nostrum* or *specific* to suggest, and no routine treatment to offer; but I hope to show one that is rational and scientific, one based on conditions and circumstances and the peculiar morbid actions that may attend each particular case.

It is undeniable, that a dread of this disease, more than of any other, fills the public mind; that the very first outbreak of it, in any locality, spreads terror and consternation in the community. People begin to flee who can, and those left hang on with fear and trembling, believing they must inevitably take the disease, and as inevitably die from it.

Now with this state of feeling pervading all classes, what are likely to be necessary consequences, when scores are prostrated by this rapid and malignant disease, unless this fear and trepidation are counteracted by some appropriate and adequate means? We all too well know the result. Right here, then, is the beginning point in the correct treatment of yellow fever. Disarm your patient, at your very first visit, of his fears and apprehensions of a fatal result. Inspire confidence and infuse into him moral courage and mental vigor. This, as his physician, you should be able to do. When your patient watches your every move and expression; looks you in the eyes, and with despair depicted in his countenance, tremblingly asks you, "Doctor, do you think I can get well?" Tell him with emphasis, yes, if you will be a man, and dismiss your unnecessary and foolish fears, that the disease you are now suffering with is not *necessarily* as dangerous as pneumonia, nor as difficult to treat as pernicious, remittent and intermittent fevers. Tell him this, believing it, and say it in such a manner as will convince him that you do believe it. You will thus, kindle up hope; create as it were a renewed vitality of mental action, and this, acting upon the general nervous system, produces a corresponding better condition of all the functional actions of the animal mechanism, thus rendering his situation more favorable for judicious medication.

Sometimes you will find a patient, whose despair has plunged him into the slough of indifference and listlessness. He turns his face from you when you approach him, as though you were an intruder, and scarcely takes interest enough in himself to answer your questions. These are more difficult to manage than the former. But you must endeavor to incite them to hope; work to dispel that indifference, and to wake

up their beclouded minds to a cheerful hope of life. For this, the medical attendant must be well imbued with a sense of his responsibility and the high mission of his calling, and requires a well trained and disciplined mind and high moral courage. That strong impressions made upon the mind in sickness, as in health, do exercise a powerful and controlling influence over the functions of the animal economy, I presume no man, posted in the literature of his profession, and not defective in observation, will deny; and it is this potent and acknowledged principle in the science of life, which it is the duty of every physician to understand and apply when occasion requires it. Having, then, invoked this principle in these cases, where needed to the best of our ability, we turn our attention to the other conditions. And the first thing that we have to comprehend, and to bear constantly in mind, when we are called to treat this disease, whether it be mild or grave in its manifestations is the undisputed fact, that we have to contend with a train of morbid actions, that are rapid in their progress and vicious in their tendencies. And hence, whatever measures are adopted of a curative character, must be promptly resorted to; used at the very incipiency of the attack, at least within the first 12 or 24 hours, before those chemical and molecular changes take place in the organic structures and fluids of the system, that render a cure impossible.

Bearing this general and fundamental fact in mind, we must treat each case according to the special indications present. If the skin is hot and dry, or dry without being hot, as is sometimes the case, the patient, being in bed, should have a warm or hot mustard foot-bath, given under blankets to retain the vapor, supplemented by potions of any warm diaphoretic beverage, in order to determine the circulation to the skin, and to induce a moderate diaphoresis, and thus to relieve in some measure the internal congested organs. But, this sweating process must not be carried to excess, either in quantity or duration of time, which is almost universally done, to the great discomfort and disadvantage of the patient. When the function of the skin is once established, it can be easily maintained at the proper standard, and still keep the patient comfortable, by giving small and repeated potations of cold or iced water—allowing free ventilation of the room, and a light blanket or two, according to temperature, to prevent any sudden cooling impression upon the cutaneous surface.

Should the seizure occur when the stomach is loaded with food, it should be at once emptied, either with warm water, mustard and salt, or ipecacuanha; and the stomach then quieted as quickly as possible, should it be left irritable. For this purpose a mustard cataplasm applied over the epigastrium, and a little mint tea, mint julep, or small doses of morphine with bi-carb. soda given internally, will suffice. Frequently

merely sponging the face and temples with cologne, bay rum or eau sedative, will produce a satisfactory revulsive effect.

Sometimes at the onset, the bowels are found loaded and constipated. Here it will be expedient and necessary to unload them; but it is by no means a matter of indifference by what means it is done. I carefully discard and condemn the use of *castor oil*, which is the standard and almost universal cathartic in every case in the hands of practitioners and trained nurses. And I discard it, as I do every other irritating cathartic, from its well-known irritating properties upon the mucous coat of the stomach and bowels, and its further aptitude to produce a persistent nausea. With this property of the drug, so well established and clearly manifested, in almost every case in which it is administered, it is a matter of extreme surprise, that physicians should so pertinaciously cling to its use, and more especially since in this disease irritability and disturbance of the stomach are so prone to occur and so much to be dreaded. Instead of castor oil, enemas of warm water with camphorated oil should be given, which will always empty the bowels without irritating or disturbing the nervous filaments or mucous coat of the stomach and bowels. Should a more active cathartic be required, as is sometimes, but rarely the case, to work off the vitiated secretions, and to unload the mucous follicles and intestinal capillaries, an infusion of ℥ii fol. sennæ with an ounce or ounce and a half of sulphate magnesia, combined with some agreeable aromatic to cover the taste, and given in divided doses, will answer an admirable purpose.

Sometimes the beginning of the attack is marked by strong cerebral symptoms, being ushered in by sudden and deep coma and profound unconsciousness, or raving delirium. This was notably the case in the epidemic of 1853 in in the locality where I was practicing. In those cases I bled from the arm or opened the temporal arteries and bled freely, without regard to quantity, till the brain was relieved. And I declare here, though I bled many, I did not lose a single patient thus treated. You may call this bold treatment, yea, hazardous, if you please; and certainly it would be so pronounced by *Reynolds* and *Flint*, and men of that school of philosophy; but the result disproves the truth of their theory and teachings. Besides, there is no other prompt and efficient means of relieving this dangerously excited or fatally congested vital organ, and if the practice is bold, I reply that a physician's calling requires nerve and boldness to meet emergencies, and judgment to adapt his measures to counteract pressing dangers. To trust to revulsives and cerebral and cardiac sedatives in such cases were certain death. Besides, all this talk of late years against bloodletting, of drawing off the vital fluid in sthenic and inflammatory diseases, and the dangerous debilities and slow con-

valescences following the abstraction of blood, is sheer nonsense, having no foundation in fact, in sound reason, or correct physiology. It is a bug-bear, that serves only to make cowards of the timorous; to put in jeopardy human life, and should be spurned by all intelligent and scientific physicians. I would like to speak more fully upon the subject of blood-letting, so important do I regard it in some cases, but I must refrain, lest I should be tedious. Having now gotten our patient's fears dispelled, his mind toned up, his brain relieved, his stomach and bowels cleared, and his skin moderately perspiring, we can further investigate his symptoms. We find that his tongue is furred, his saliva thick and clammy, his epigastrium and right hypoc ndrium tender with a sense of tightness, his urine scanty, his eyes injected, his temperature elevated, his pulse quick and respirations hurried, and pain in head, back, limbs. He has fever, and his symptoms point to *sepsis*, with a recognized tendency to rapid destruction of the mucous coat of the stomach, structural change of liver, disorganization of the kidneys and decomposition of the blood. These are the prominent pathological changes going on in the system of a yellow fever subject, clearly revealed by the symptoms and corroborated by *post-mortem* examinations.

To meet these conditions, for an adult I usually prescribe 20 grs. calomel with 20 to 30 of quinine, divided into four doses, giving one every four hours, till all are taken. And this I do in the *hot stage*, as early in the attack as possible, provided there are no brain complications to opposs the use of quinine. Under the use of these, the fever and temperature subside, the patient becomes calm and comfortable, the urine more abundant; a state of apyrexia has ensued. The bowels generally act spontaneously, passing off dark, thick, tarry stools. If they should not, use an enema of warm water with camphorated oil, or the infusion of senna and epsom salts will bring that result about.

This is generally all the medicine that I resort to. Within the first twenty-four hours I have pushed my active treatment and cured my patient, or else relieved his embarrassed and oppressed vital organs, and placed him in a condition favorable to a progressive return to health. By the calomel, I have aroused the liver to its normal functions and disgorged its vascular congestion, and soothed the irritated mucous coat of the stomach. By the quinine, I have quieted the turmoil of the organic system of nerves and given them strength, and thus have restored the several organs to their normal and harmonious work, and thereby counteracted the *septic* changes of the blood. The further treatment consists simply in good nursing—keeping the patient quiet in bed and comfortable, free from all excitement of body or mind; the regular and careful administration of suitable nutrition; the moderate allowance of good brandy, cool drinks, and no exercise or company under ten to twelve days.

Unfortunately, should the case not be seen sufficiently realy to admit of this decisive curative treatment; or if seen, and the proper remedies were not used; or if, from imprudence or unfavorable surroundings or constitutional proclivities, complications should develop, they must be met by rational modes of treatment, and not by reckless experimentation. Should nausea or irritability of the stomach manifest itself, a *fly blister* should be promptly applied over the epigrastrium, and ice moderately allowed or cool water; and, where no brain symptoms interdict it, small doses of morphine with mint water and bicarb. soda will answer a good purpose. And I have frequently used, with great advantage, small doses of creasote combined with a little morphine and bicarb. soda, in form of an emulsion.

If the patient is restless and sleepless from nervous irritability, morphine or dover's powder will be called for, to induce calm and refreshing sleep. If there be active cerebral congestion, or hyperæmia of the brain, in the second stage of the disease, cold or iced applications must be kept to the head, and bromide of potass given internally. If a hemorrhagic tendency displays itself, or black vomit threatens, the free and liberal use of the muriated tincture of iron, conjoined with ice and good cognac, I have found to be of great advantage, rescuing patients almost from the jaws of death.

If suppression of urine should come on, which I regard as one of the most discouraging and fatal complications, I know of nothing better than dry cups over the kidneys, and frequent frictions with warm spirits of turpentine, mixed with tinct. digitalis, and the internal use of nitrate potass in warm flaxseed tea.

Such, gentlemen, has been my general plan of treatment. I speak of it confidently, because it has given me the most gratifying results. These good results, which I have claimed as attainable, by a judicious and timely treatment of this disease, may be regarded by some of you as extravagant and chimerical, being so opposed to almost universal experience. It was my purpose not specially to advert to my own practice and statistics, to verify my opinions on this point, for fear of being misconstrued: but, since writing the foregoing, I bethought that, at my advanced age and the necessarily few short years that at best I can remain in active practice, surely you would do me the justice to believe, that if I should be mistaken, my single and only purpose could be to advance the success of practical medicine and benefit suffering humanity.

I then state that, beginning with the epidemic of 1853, and with every subsequent epidemic, my experience has been uniformly the same, and tallies with the statistics of 1878. In this latter year we made daily reports of our cases occurring, with certificates of death, to our health officer, setting

forth location of case, name, age, sex, single or married, race, color, etc. That year our health officer was our respected ex-president, Dr. J. W. Dupree, who being present, can easily correct any mistatement, if I make any. My reports and certificates to him show that, in the space of two months I treated between 600 and 700 cases, and that my deaths were 17 out of the whole number. You may call this good luck, or whatever else you please; still the fact remains, that I lost in 1878, out of nearly 700 cases of yellow fever, only 17 patients. And I verily believe, that whatever measure of success attended my professional efforts, would follow the practice of other medical men, exercising the same careful thought and timely efforts, that I gave to each of my cases.

Gentlemen, I have intentionally avoided quoting the opinions of different authors upon this subject, and contrasting their conflicting and opposite plans of treatment, because I did not wish to parade before this society what has been written by others, and already as familiar to you as to myself. My aim has been to give you my own thoughts in my own language and my own experience. If I have made my views clear and intelligible, I am satisfied. You can test them in practice, if you like. If you do it faithfully, correctly and *in time*, *which is all important*, you will soon disarm this scourge of its terror, re-open the obstructed chanels of commerce and travel, and make our Queen City the delight of the whole land.

PULMONARY CONSUMPTION, OR TUBERCULOSIS.

By M. Schuppert, M. D.

According to one of the late statements of the Board of Health, there have died in our city during the last twelve years 10,000 persons from "pulmonary consumption," which amouts to 833 yearly, or 16 per week. What is the cause, we may ask, of so high a death-rate? and what are the prospects, if there are any, for a change for the better? The justice and propriety of these important and timely questions, I think ought to be fully recognized. Every man not a predestinarian, or adhering to the theory that *war* and *pestilence* are necessary or even providential elements, to keep in due proportion the population with the soil it inhabits, will be justified in inquiring into the causes and propagation of pulmonary consumption, a disease which destructiveness in rivals even epidemic yellow fever and cholera, if it does not surpass them, and which, so far as our general knowledge extends, seems to have baffled all the weapons science and art have devised against it. In taking up the question of the na-

ture and cause, or rather causes, of the fearfully large numbers falling victims yearly to the increasing propagation of pulmonary consumption, I will give here in a condensed form a report of what the last years have brought to light of the true nature of the disease in question, and what I may be able to confirm in part by my own experience.

In order to attract the interest of the inquirer in a higher measure than would probably happen in consequence of the apparent hoplessness and disappointments which so far have accompanied all efforts to diminish its ravages, I will here anticipate my closing remarks with the statement: that the results of late investigations have surpassed our most sanguine expectations, that the humiliation and agonies of our impotence felt for so long from the brutal power of this loathsome disease, are well nigh over, and that the time is not far distant when pulmonary consumption will be counted among the diseases having merely a historical interest, in so far at least as its present destructive character comes into question. Besides, let it be well understood, that the theory here advanced has no tendency to, or having been adapted to practice, but that it is the expression of what practice and experiment have demonstrated beyond a doubt: that the pathogenous infection with the products of tuberculous substances in the respiratory tract, as well as in other organs of man and animals, have removed the last objection that could be raised against the infectious nature of the disease under consideration.

Among the histological different forms constituting pulmonary consumption or pulmonary phthisis and the catarrhal, fibroid, strumous, or caseous phthisis, there is *one* bearing the highest interest, and which we comprehend under the name of *tuberculosis*, to which we have to give here our main attention. The victims of that formidable destructive disease we meet with in almost all countries, in mountainous regions as well as on the plains, at sea as well as on land; though the majority of its victims are chiefly met with in thickly populated, commercial cities, in crowded domicils, amongst certain classes and occupations of men, living under the most unfavorable circumstances and breathing an impure, vile, contaminated air. Hardly in any other disease do we recognize so impressively the nemesis of neglected sanitary laws as in this.

To Germany belongs the honor of having given us the latest exhaustive researches in *tuberculosis*. After the investigations on the treatment of wounds had been brought there to a satisfactory termination, and had been based for all time to come upon fixed, unalterable principles, the next matter of import, in which pathologists tried to reach a solution, encompassed the investigation of *tuberculosis*. Though the revelation of its true nature did not for long resist the united efforts of a dozen investigating pathologists, yet in the treatment of the disease the high criterion won in the former mat-

ter has not been obtained in a degree, to pronounce the acts closed; the success has nevertheless been satisfactory to a greater extent than we had a right to expect, judging by the short space of time which has elapsed since the investigations began.

The result at which they have arrrived consists in the incontrovertible fact, that *tuberculosis is an infectious, inoculalable disease* of a *monadistic order;* originating in, or caused by the action of living *micro-organisms. Microbia* (smallest living bodies) are the real causes wherever tuberculous deposits are met with, be it in the lungs, the intestines, or in other parts of the human body. These smallest living organisms, of which hundreds of thousands may find room in one single drop of water, will stultify in fact our ideas and comprehensions of numbers. What place these countless myriads occupy in the household of nature, our deep submarine fields and various mountains can tell; but what are they to man, who according to the philosopher of Abdera (Protagoras) is the "measure and aim of all things," if not his greatest enemies? Though often too small to be discerned even with our most powerful magnifying optical instruments, it is their action "en masse," their rapid multiplication and propagation, that renders them so dangerous to the life of man and animals. Pasteur of France, Cohn and Hallier of Germany, have first proved that these microbia (bacteria, vibriones, etc.) are the real cause of the process of putrefaction of animal and vegetable bodies. Pasteur proved that different bacteria would produce different processes. Thus *one* bacterium will cause the fermentation of milk; another the butyric formation; another putrefaction. Amongst animals the pustula maligna and chicken cholera are equally produced by certain bacteria, and thus have we also to search amongst that class of micro-organisms for the cause, the origin of tuberculosis, yellow fever, smallpox, scarlatina, diphtheria, in fact all of our infectious or contagious diseases. It is not by a bare contemplation of any abstract ideas, that we have come to the truth and certainty of the existence of these micro-organisms as the cause and origin of these infectious diseases, but by rational and regular experiments have we obtained the knowledge of the nature and existence of these bodies. All the arguments pro and con properly weighed, the judgment is irresistible; it leaves no room for hesitation, doubt, or further examination. The certainty and evidence of our knowledge is such, that we might almost call it, if not intuitive, certainly demonstrative. The invisibility of these organisms, the failure to point them out with the microscope, can have but few reasons: they either do not reflect the light, which would render them invisible, or they are so small that they will not be discerned even with the aid of our best magnifying instruments; even our optic power, the power of vision, may be a limited one.

But even where the microscope, or our power of vision fails to to point out the existence of such micro-organisms, human genius has fallen upon a method to prove their presence, nevertheless, in any liquid. Such is accomplished by the so called *fractional culture* method. We will explain this in returning to our disease, tuberculosis which, we asserted, is the product of such microbiotic action. It had been argued and was proven, that these organisms would propagate in certain substances containing proteine bodies, like in albumen, the white of the egg, or in some artificial compounds, like Bergmann's fluid (tartrate of ammonia, phosphate of potassium, sugar and water). A small particle of tubercle taken from a diseased lung, or even some of the sputa of a tuberculous patient, if placed in such a liquid and exposed to the influence of a certain temperature, in a short time millions of such tubercular organisms will be produced and grow in that liquid. One drop of such a liquid taken out and placed in another portion of such fluid containing albumen, will soon again produce millions of the same organisms, which experiment may be repeated a dozen times, and always with the same result. If now some of such a fractional culture liquid is injected into a lung, intestine, liver or peritoneum of an animal, tubercles will be produced, resembling exactly those from which the experiment started. It is obvious that such a result can only be explained by the presence, the existence of living organisms. But it is further obvious that, with these experiments and methods of investigation, we have not only obtained the proof of the true nature of the disease in question, but they have also enabled us to decide the question of life or death of such micro-organisms, a question to settle which the microscope cannot always be depended upon to decide correctly and undubitably.

The Darwinian idea, that the inhabitants of certain countries will be protected by natural selection against such infectious diseases as are of an endemic character, whilst foreigners in whose countries such diseases be rare would readily succumb to them,—this idea has to be considered erroneous—it is lacking the support of the accumulative evidence of the efficiency of micro-organisms in infectious diseases, which have to be considered as their real cause. The views of Darwin in this instance are untenable and originated in ignorance of the true character of infectious diseases. Equally absurd is the idea of the *out living itself* (sich selbstüberleben) and voluntary decrease of contagious diseases (or epidemics), and to explain this by the same cause of natural selection. The study of tuberculosis and other infectious diseases gives us another and truer explanation of the matter, wherewith we have proved tubercle to be the product of organisms coming from without.

It is now proper to say a few words in regard to the *causes of the progressive propagation of tuberculosis*, previous to speaking of the treatment and the hope of exterminating the disease, or reducing its high mortality to at least moderate numbers.

Amongst the various causes of pulmonary consumption we find mentioned *inheritance.* That under inheritance, after what we have said of the nature of the disease, an *hereditary disposition* can only be understood, it needs hardly any further comment. Catarrhal processes, which by themselves are more or less harmless, or cause slight modifications in the character of the different organs of the human body, will, under certain circumstances, as for instance this *hereditary disposition*, present a soil of easy access for microbiotic action. A neglect of those organic laws, which rule over our existence, may blast the health and imperil the life of the most robust and sound man. A disregarded cold may thus prostrate an apparently strong, healthy person; and it may, under circumstances, gradually develop into tuberculosis. An hereditary diathesis may further be suspected, where divers members of a family have already succumbed to the disease.

In inquiring further into the causes of an inherited diathesis or disposition, the history of pulmonary consumption will teach us the statistically undisputed fact, that with the increase, the propagandism of vaccination, pulmonary consumptions will have equally increased, and the more so did this become manifest, since vaccination advanced to a compulsory operation. That the two diseases, *tuberculosis* and *scrofulosis*, have spread more extensively with the universal introduction of vaccination, no doubt can exist, neither is there any obstacle in the way, to consider them in the relation of cause and effect, though in the present state of our pathological knowedge, absolnte certainty hereof cannot be secured. Aside from the indisputable fact that vaccination has undermined the health of thousands of people, it is more than doubtful, that we have exchanged a grave disease for a gift of very problematical value. A serious contemplation of that practice and of its ludicrous origin, its unsettled wavering maxims. of the changes and alterations it underwent, with the experience on hand of its inefficiency as a protection against the infection of small-pox poison, will cause its utter condemnation; and this the more so, since we are in possession of other and far superior hygienic measures of preventing epidemics of that loathsome disease, small-pox. It is to be hoped, therefore, that the International Congress, which of late deliberated in Paris, France, a convention composed of representive men of France, Germany, Belgium, Switzerland, Holland and Italy, may succeed in their endeavors to abolish at least the existing laws of compulsary vaccination. Another cause in an *hereditary disposition* to tuberculosis, we may meet with in persons following certain occupations or trades, as grinders, stone-cutters and miners (who seldom reach the age of forty odd years); further in such as are employed in wool, moss and cotton mills and fabrics, who inhale constantly a great deal of the dust of these substances, laying thereby the foundation of the later developed tubercular disease. Further, why should

not an hereditary disposition be developed in their offspring, if we consider the fact, that so many children are begotten just at a time when tuberculosis is making the most rapid progress in the father or mother? Not that we intend hereby to insinuate the inheritance of the tubercular disease, which we have already denied to be possible, since tuberculosis can but come *from without* and is acquired by the immigration of micro-organisms. What we mean is the *disposition* in the offspring, the liability of becoming infected on account of hereditary enfeebled, debilitated respiratory organs. We cannot compare this with syphilis, as has been attempted. The latter is no analagon, on account of its virus being transferable to the offspring. So much is then certain: tuberculosis in a great many people is traceable to a parentage, engaged in one, or the other of those trades or occupations just mentioned; and if, as we hope to prove at the conclusion of this exposition, we should be able to cure tuberculosis, we might remove also the most fruitful and important sources of hereditary diathesis; and that hope might still increase with the abolishment of another and not less fruitful source of hereditary disposition, the abominable and absurd habit of *vaccination, as it at present exists.*

Quite different would it be indeed, if the expectation of Pasteur should become realized, and he would succeed in modifying, by his *fractional culture method*, the character of certain micro-organisms, as he believes to have accomplished with those causing the chicken cholera. In such a case vaccination, or the operation of infection, would have to be considered in an entirely different light and quite distinct from that of our present method, which is but a delusion and a humbug of the worst kind, whether the vaccine be taken from man or the cow.

It is left then to me to answer the last question in regard to the hope for the better of the present fearful waste of human life, which answer I have already anticipated. This result depends in a great measure upon the use of the proper therapeutics, and quite different from the treatment, as at present adopted, by the majority of the medical profession. If I had to give a definition of tuberculosis in the light in which it is still viewed by the majority of medical men, I might call it a disease, in which the reputation of the medical practitioner would rarely escape bankruptcy, if he had not fortunately, or rather unfortunately, the popular delusion in his favor, that after a due and exhaustive drugging, the victim, as a last resort, has to be transferred to a "more propitious clime," and as far away from home as possible, so as not to be reminded of broken promises and unfulfilled pledges. The prevailing popular idea at present is, that pulmonary consumption, if once firmly established, will go on progressively from bad to worse, and end invariably

in death, to which we find occasionally added, "if proper measures are not taken in time." But if we inquire, of what these proper measures consist, we find mentioned half a dozen so-called "essential" remedies, amongst which, as the non plus ultra, stands the cod liver oil, with the hypo-phosphite of lime and iron and "solamen phthisicorum," opium, as the sheet anchors of treatment. The older physicians, in addition, made use of fontanelles and other derivatives. Amongst their dietetic prescriptions were mild nourishments, in opposition to others, who fought the disease with strong soups, meat, eggs, wine and whiskey. But whatever the method or the remedies are or may have been, the number of the dead has not been diminished, but on the contrary has rather increased. Meanwhile a new and even worse enemy appeared in the form of the amyloid degeneration, and the patient, instead of tuberculous, dies dropsical. We need not be astonished in meeting with the high priests of the "ars medicinæ," who called fortunate the phthisical patient, in whose lungs tubercles became developed; "then," said he, "where tubercles are, there the phthisis is not yet located," and what is there which has not been accused of causing tuberculosis? "Initial disorders in the digestive organs, irregularities in alimentation" had not seldom lent a hand in tracing the first symptoms of a beginning phthisis, to which, as further nefarious factors, "hereditary influences" were called in assistance. "A moist and variable climatic influence" with a dozen other minor causes was equally accused. In the face of these "discoveries, lucid experiments and well established facts," we feel a chilly sensation to overcome us, at hearing men still speak of "rational physicians, well experienced in the causes and treatment of pulmonary consumption," and this in view of the many well filled grave-yards! After what we have said here, it certainly cannot be considered a forcible argument in referring to the experience of the medical profession in treating the disease in question. To professional indifference will it to a great extent be due, when quacks and patent medicines shall experience in the future still such good markets as they have met with heretofore in almost all communities, if the manufacturers of the innumerable "elixirs, health restoratives, and universal panaceas," and whatever the title of the diverse advertised and puffed up "life preservatives" may be, accumulate riches; whilst true science goes a begging. From what I have previously stated of the result of the late investigations into the nature of tuberculosis and of some of the causes of its propagation, it is evident that the high death rate of the disease can be accounted for mainly by the still existing widespread ignorance of the nature and causes of the disease in question. But the mystery which has so long surrounded the true nature of pulmonary phthisis has finally and fortunately been dispelled by the intelligent and indefatigable

working of a dozen scientists, who have given us an account of their researches and the means employed to divest the secrets of the true character of the disease, and with a harmony in the results obtained on the subject eminently respectable and encouraging.

There is then left to me to bring the proofs of what I have already mentioned for a state to the better, of that bright future before us; if not to eradicate that terrible disease totally, to deprive it at least of that terror which the wide spread belief in its incurability has created. In the midst of a cimmerian darkness surrounding us, a new era has dawned in Germany under the dominion of pathological anatomy. Up to the year 1879 the treatment of tuberculosis had already made considerable progress, after the introduction of the pneumatic method. The new investigations published in 1880 from a dozen pathologic l laboratories, in addition to the already known pneumatic results with compressed, diluted and medicated air, had struck a new and wealthy mine, which promised accessory riches. The results obtained with the inhalation of antiseptic and antipyretic remedies in vapour form, and tried on animals as well as on man, almost surpassed our keenest expectations, and I can speak here ex cathedra, in adding my own experience. Since my return from Berlin, Prussia, in 1875, in which city during six weeks of continual observation of the success obtained by the method of Waldenberg in the treatment of certain diseases of the lungs and the heart, I had gained confidence in the new additional treatment and the conviction of the importance of the revolution introduced in the treatment of tuberculosis; there has now been gained another, and in some respects even superior, weapon to attack that formidable enemy by the antiseptic method. Under the combination of the two methods in the treatment of tuberculosis, results have been obtained in my practice surpassing the most sanguine expectations. I cannot give here, from want of time, an enumeration of the cases which I observed, in the treatment of phthisical patients, from an almost hopeless state to enter life again, which they had already given up for lost. The experience won was not only confirmatory of the correct views of the nature, but also of the therapeutical method in conquering the disease. It is mainly due to Schuller, who following in the footsteps of Klebs* had practitically tried on animals, previously made tuberculous, the efficiency of some of the antiseptic remedies which were brought in direct contact with the diseased lungs. He always selected two animals resembling each other as much as possible; both were poisoned by the same quantity of tubercular matter; and, whilst the one which un-

*Klebs, in order to decide that the virus in tuberculosis was not the product of the cells of the tubercular neoplasm, but existed independent of them, proved this by a great number of repeated fractional culture experiments, by which one drop of a liquid containing tubercular matter brought into a liquid of diluted albumen, caused the production of myriads of micro-organisms; and such took place as often as the experiment was renewed in the same manner with a fresh portion of the culture liquid.

derwent the treatment recovered its full health, the other, left to itself, invariably died. These experiments, repeatedly tried, proved beyond all doubt the correctness of the views advanced and the efficiency of the treatment. It was not long after these publications, when we obtained from the hospital of Inspruck, Austria, confirmatory results obtained on man and of tuberculous patients recovering under the new treatment. True, it has not failed of opposition, based on negative results obtained by others. In whatever these failures may have had their cause, it is not for me here to investigate. I can only state, that a long time before these publications appeared in print, I had upon private communication undertaken the treatment on several phthisical patients, and though in some of them the disease had already made considerable progress, I gained, nevertheless, sufficient success to confirm the efficiency of the new method.

The conclusion I have arrived at is, that tuberculosis is a manageable disease, and has lost its former terror. If taken hold of in time, it will yield to a proper rational treatment. Wherever I saw it fail, it was not in the method, but in other unfortunate circumstances in which the patient was placed; and to which often came the want of every comfort and necessary rest at home.

And now a word on the future—what does it portend? Is there a break visible in the past? does a new dawning era cast its shadows in advance? What significance can be attached to this, for many, new revelation of the nature and treatment of tuberculosis? Should not every intelligent physician adopt a theory fraught with so much clearness as to commend itself almost instantaneously, and should he not at once be fully committed to the support of a treatment promising such admirable results? We do not know, for we do not meet in medical history sufficient aid and encouragement in the belief, that scientific revolutions, such as the present, will soon find adepts amongst a class known for the tenacity with which they stick to old and beloved ideas, in which many may have even grown gray. And how is it with the public, the people in general, and most so with those who are so unfortunate as to be on the list of the sufferers—will they profit by the new revelations, and will the mortuary tables present in the near future smaller numbers? will the victims of pulmonary consumption become diminished? Does human nature change with a change in domicile? Does it make a difference on what side of the Atlantic it is met with? The mystery which has so long surrounded the nature of pulmonary consumption has now been dispelled; of its secrets it has been divested; but the crabs of progress do yet remain. Prejudices, the children of ignorance, do not succumb at once to stormy attacks. They may come out of the battle weakened, even shattered, but not annihilated. The only hope for a final

victory, for healthier views, can but be expected from an improved system of education in our Public Schools. Not merely a one-horse concern, in which the intellectual activity of the future citizen is cultivated, while his physical well-being is neglected. Not such a mental stall-feeding as at present exists, but where the scholar is equally instructed in the natural sciences, in hygiene and sanitary affairs. Ideas begotten in a logical thinking brain will then help ripen the crops in the domain of nature. To such a youth belongs the future. In such a rising generation only can rest our hope for a better state in all matters, including even those affecting and belonging exclusively to the medical profession. But whence is the perception, the support to come; where are we to find the instructors, and from whence finally shall the means come, in order to effect such a purpose? There is the rub, and we declare our hopes do sink below zero in the face of the present stern reality of our impotence.

CASE OF RETENTION OF MENSTRUATION WITH REGURGITATION IN LEFT FALLOPIAN TUBE.

REPORTED BY

Dr. E. S. Lewis, Prof. Obst. and Gynæcology, Univ. of La.

The relation of cases of exceptional occurrence and presenting unusual features, establishes precedents for future guidance, which cannot be overestimated and ofttimes influence results favorably.

The case to be related is that of Josephine B., a native of New Orleans, of German parentage, aged nineteen years. She is tall, well formed, of a sanguine-nervous temperament. She had never menstruated, and with the exception of occasional cramp-like pains in the abdomen, and the discomfort produced by adominal enlargement, enjoyed pretty fair health. Four years previously her urine was drawn once by a physician, because of retention. Examined in the dorsal decubitus, the abdomen was found occupied by two tumors, evident on inspection and palpation. The large one, in the median line, presented a pyriform shape and extended to two fingers' breadth above the umbilicus; its size being that of a seven months' gestation. The other was the size of a turkey-egg, situated on a level with the umbilicus, to the left, and closely connected with the larger tumor, a sulcus separating the two, the shape nearly circular. Fluctuation was readily detected in both, though more apparent in the smaller. A

vaginal examaination disclosed an imperforate hymen stretched in its circumferential area to the size of a silver dollar, tense and bulging and of a purplish blue color. The diagnosis of menstrual retention was established, with regurgitation in left fallopian tube producing the smaller tumor.

The gravity of such a condition under what-ever treatment pursued, whether by slow or rapid evacuation of the contained fluid, is generally recognized "The difficulty," Hewitt states, "is not in affording relief to the patient and giving an outlet to the pent up menstrual fluid, but in preventing the death of the patient from the operation." Hewitt and Bernutz, and Barnes, recommend gradual evacuation, the two former by valvular opening, the latter by the aspirator trocar. Emmett, whose experience is limited to but two cases, with an average amount of accumulation not exceeding six ounces, advocates a free opening and rapid removal. West mentions but two cases in his personal experience, and is also in favor of a crucial incision. The limited number of such cases falling into the hands of the specialist is easily accounted for outside of their infrequency. The thrust of a trocar or the prick of a lancet affords the desired relief, and the dangers are not perhaps fully appreciated.

After deliberating upon the different operative procedures, aspiration was resolved upon as offering greater immunity from accidents. Accompanied by Drs. DeRoaldes and Miles, who examined the patient, the hymen was punctured with the finest needle of the aspirator, and six ounces of a tarry fluid removed. The following days, May 14th, 15th, 16th, as much more each time was abstracted without visibly altering the bulk of the uterus. On the 17th, finding the flow of the now thicker fluid very slow in the cylinder, the largest trocar in the case was substituted, and nine ounces were withdrawn. In all thirty-three ounces were withdrawn. The opening made by the trocar allowed considerable escape of fluid after its removal, which continued until my next visit, at 6, P. M., on the 18th. Entering the room, a most disagreeable odor pervaded the apartment. Found my patient pale, with a pulse of 120, and a temperature of 102½°; some tenderness over the abdomen. Was told she had been delirious during the night. Decomposition had taken place in the fluid from the admission of air, and had produced septicæmia. Satisfied that nothing short of complete evacuation of the uterus would now be safe, a circular piece of the hymen was removed, after which fully two quarts (estimated, not measured) of offensive menstrual fluid were discharged. The cavity of the uterus was then thoroughly sponged out with weak carbolized tepid water, until the fluid came away perfectly clear. The patient was then given 24 grains sulph. quinine, in 4 gr. doses, hourly. When seen again that night, five hours later, the temperature had fallen to 100°, and her general condition was satisfactory.

May 19th, seen morning and evening; no fever; a little florid

blood was discharged from vagina, but without odor. Did not repeat injections. The smaller tumor remained unaffected by the evacuation of the uterus, and evidently no longer communicated with its cavity. What to do with it was the next question to be resolved upon. May 20th, patient still comfortable and without fever. The evening of the same day, at 4., P. M., she was seized with so acute a pain as to utter screams. I did not see her before 6, P. M., and found her frightfully changed. Pinched and decomposed features with corpse-like pallor, cold skin, bedewed with perspiration, thready pulse, vomiting and great tenderness over the abdomen. The symptoms were those of general peritonitis or of hæmatocele. My first idea was of rupture of the fallopian cyst, but upon examination it was undiminished in size. The suddenness of the invasion, whilst turning in bed seemed rather to point to rupture of a blood vessel, which a vaginal exploration confirmed. The vagina, which the day before was sufficiently relaxed for the introduction of the hand, now offered an obstacle to the introduction of two fingers, the anterior wall feeling tense and elastic, and the cervix beyond reach. From the peritonitis which succeeded the following day, in all likelihood there was escape of blood in the peritoneal cavity also. Prescribed ice and small quantities of iced brandy and water; gave a hypodermic of a quarter of a grain of morphia, leaving a prescription of morphia, should the suffering continue.

May 21st, 9, A. M., reaction had taken place; skin warm; temperature 103°; pulse 117. Great tenderness over lower part of abdomen as high as umbilicus, some tympanites, still vomiting, but less frequently. Prescribed effervescing drinks, lumps of ice; gave another hypodermic of morphia and belladona; applications over abdomen. At 6, P. M., found pulse 120, tem. 103½°; same treatment continued.

During the two weeks which followed, the temperature and pulse were recorded twice daily. After this period for about a month longer she continued with fever, but as she was not seen every day, I have taken no note of it. At the end of the first week, the lower portion of the abdomen, as high as the umbilicus, was dull on percussion, and hard from fibrinous exudation. At the end of the second week the inflammatory symptoms had entirely subsided. Counterirritants were used to promote absorption, and small doses of iodide of potash administered internally. The exudation disappeared slowly. On the 15th of June aspirated the smaller tumor, using the finest needle in my case. About four ounces of menstrual fluid were abstracted. It was unchanged and odorless. I was led to do this, owing to the continuance of the fever, which I attributed to septicæmia, possibly from decomposition of the fluid in the fallopian tube, which I thought might have been affected by the decomposed fluid in the uterus. The tumor diminished in

size, but in a week's time attained its former development. Aspirated a second time, using a larger trocar, Dr. Logan assisting, removing a sanguino-purulent fluid. Injected a little carbolized water in sack. This gave but temporary relief. The symptoms of septicæmia continued, diarrhœa set in, disagreeably complicating the case. Resolved to enlarge the opening and establish a drain. Dr. Mioton administered chloroform to the patient, and I cut down upon the tumor, making an opening about an inch in length. The cavity was thoroughly washed out, and a tent introduced. Daily injected carbolized water. Under this treatment she rapidly improved, and was convalescent in two months after the first aspiration of the hymen. The fistulous opening resulting continued to discharge for several weeks, finally closing. She now is in perfect health; menstruates every month without pain.

ERATA.—The paging of this number of the Journal commencing at page 2000 is incorrect—it should be 1100 and so continue.

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ORIGINAL COMMUNICATIONS.

Circumcision.

By MAX URWITZ.

It is a story of old,
Yet it remains ever new.

—HEINRICH HEINE.

HISTORY.

It is a child of the remotest antiquity, when fear, that seized upon the primitive soul of man, created in their savage fantasy countless religions, barbarous and cruel, inhuman and ungodly; when human blood was sacrificed to the caprice of imaginary divinities that lived in the roaring sigh of the thunder, on the deadly edge of the whining crocodile's terrible tooth, in the foaming venom of the lurking snake, or in the huge mass of the Egyptian steer and the East Indian elephant; when no history recorded men's deeds, and human thoughts lived and died like a shadow, whose life is so short, and whose death is eternal. And so in vain we search in the annals of mankind for the origin of this mystic traditional usage, the *Circumcision.* It was practiced in Asia, performed in Africa, and even amongst the wild children of the new world seemed to have been at home. How many nations, once powerful and prosperous, have been swept away by the shud-

dering waves of cruel Lethe and buried in the icy bosom of eternal oblivion, and yet this traditional rite, unwritten and unexplained, seems to resist the gnawing tooth of time and is still living among men.

According to the narration in Genesis, circumcision was introduced among the Hebrews by their first patriarch, Abraham, who, in obedience to the command of Jehovah, performed upon it himself, his two sons, and even his male servants. But whether to Abraham belongs the inventor's patent for this operation, or he adopted it from other tribes or religious sects, we are not enlightened by the Bible. Yet there seems to be scarcely a shadow of doubt that circumcision was known and practiced long before the days of Abraham. Rawlinson, in his notes to the version of Herodotus, relates that circumcision was practiced among the Egyptians, especially their priests and warriors, at least as early as the 4th dynasty of kings, about 2000 ante Chr. Nat., and probably earlier, which assertion is corroborated by numerous monuments of upper and lower Egypt (*v.* Sir Gardian Wilkinson's "Manners and Costumes of the ancient Egyptians," and Sir John Marshan's "Chronicus Canon Aegyptiacus").

At present it is practiced from China to the Cape of Good Hope, by Mussulmans and Arabians at the age of 7–13; by the Egyptians at æt. 14, and by the Kaffirs at the beginning of manhood. The Ethiopians, Koptans and the Christians of Abyssinia, also a Christian sect in Scotland, known as "Christian Israelites," perform circumcision upon their male children. It is also practiced in the South Sea Islands, and the followers of Columbus were not a little astonished to find this operation performed by the Indians in the West Indies and Mexico. Recently, too, it has been ascertained that circumcision was practiced by several tribes of the aborigines in South America (*v.* Winer's Biblisches Realwoerserbuch). Many of the Oriental tribes perform a similar operation upon their female children, by cutting away the nymphæ, and in some instances also part of the clitoris.

The Prima Causa for the Introduction and Practice of Circumcision.

Like the date and birth-place of this operation's origin, so its motive and prima causa are enwrapped in total darkness, and very naturally so, since usages that bore the faintest stamp of a religious character were in days of old, like in our own, raised by the all absorbing hiearchy to religious dogmas and tenderly guarded against every attempt at investigation and layman's reasoning.

Among the Israelites, who continued through centuries to be the most scrupulous observers of this bloody tradition, the belief is now prevalent that circumcision was introduced as a purely religious principle and was practiced as such. But every unbiassed observer must be satisfied, beyond a shadow of a doubt, that, this general belief to the contrary notwithstanding, circumcision was *never* practiced by the ancient Jews as a religious rite, but was performed as a national emblem, and bore only so much relation to religion as nationality bore to the latter under the hierarchical laws of ancient Israel's government. This hypothesis, I believe, can be supported by the following reasons:

1. Abraham circumcised his slaves, who were, according to all national and religious traditions, not only relieved from all religious obligations, but were *never* received by the Jews as members of their creed. The performance of circumcision on these slaves could therefore only have been done as placing the Abrahamitic stamp upon his property, and not as binding them in a "covenant" to Jehovah.

2. If the traditional belief be based upon truth, that Abraham raised monothëism to the axioma axiomatum of his religious creed, how strange it must appear that Jacob's sons ask of Hamor no other condition but circumcision, to grant him the hand of their sister Dinah, if an acknowledgment of Hebrew religious principles on Hamor's part was demanded. But the truth is that no religious conversion was demanded, only an adoption of the Hebrew nationality, as was the case with women of a different nationality married to an Israelite.

3. The greatest prophet and law-giver in Israel, Moses, to

whom even the authorship of Genesis is ascribed, could dare to neglect the performance of circumcision upon his son (Exod. iv., 24, 25), while the performance of the same by his wife, Zipporah, was considered satisfactory to all intent and purpose, in spite of the well known fact that, among all Oriental religious sects, and, with only a few enumerated exceptions, the Jewish included, no woman could perform religious rites obligatory to the man, and the performance of such a rite by a woman was null and void, no matter how trifling the significance of that ceremony might be.

4. At the time of Jewish slavery in Egypt, religion was totally unknown to the Jews, as is evident from the fact that Moses asked for instructions how to introduce God to the Hebrews, and even under what name he should introduce his God. And how significant was Jehovah's answer: "Tell them the *God of Abraham, Isaac and Jacob* sent thee to them." God evidently stood in need of the credentials of the tribe's fathers to be properly and successfully introduced to the Hebrews in Egypt, because, destitute of religious belief as the enslaved Jews then were, their nationality they well preserved. And yet, this very religionless tribe, men without the knowledge of a God, had circumcised all their male children during their slavery in Egypt. (Joshua v., 5.)

5. Only those that were circumcised were privileged to participate in the celebration of the Passover feast—*the only national feast* (celebrated in commemoration of the emancipation of the Jews from slavery), while no other religious qualification was demanded for this privilege; nor was circumcision demanded from participants in religious festivals.

6. The books of the prophets are replete with lamentations, reproaches and warnings to the Jews for their manifold sins and crimes, for their forsaking the laws of Moses, aye, even for their worshipping idols, and yet not once did these very prophets accuse the Jews of neglecting circumcision. Because like all nations, ancient and modern, and especially Oriental ones, the Jews often relaxed in their religious duties, but never forgot their nationality, the emblem of which circumcision must have been.

7, The prepuces of fallen enemies were brought in triumph by the victorious Jewish warriors as war trophies into the camp. (Samuel I., xviii, 25–27.)

Josephus also reports (Antiq. ix, 1) that Hyrcanus compelled the Idumeans to circumcise, which could not have been to convert them to the Jewish religion, since proselytism was totally foreign to the spirit of Judaism. This compulsion on the part of Hyrcanus had, therefore, no other purpose but to obliterate the enemies' nationality, by their being stamped forever with that of the Israelites.

It is also remarkable that Al Koran does not mention circumcision, a ceremony so universally performed by all Mohammedans.—Here I take the opportunity to express my regret for not being able to pursue the subject with researches into Arabian medical works, which are supposed to throw light upon the motive of circumcision among the Arabian tribes, since, in spite of my endeavors, I did not succeed in providing myself with any of the desired works.

As to the motives of the ancients for introducing circumcision, some ascribe to them the intention of promoting fertility through it, others again argue just the reverse, etc. But it seems to me that two other obvious reasons were the cause of the introduction of circumcision, and one of these two reasons served to perpetuate this traditional operation:

1. There can scarcely be a shadow of doubt that circumcision was invented as a compromise between the old bloodthirsty divinities and men, and introduced by some ingenious and tender father, in order to save the life of his child, as a substitute for human sacrifices, a bloody piety once practiced in extenso by countless Oriental tribes, and even at a comparatively later period among the different tribes of Israel in Palestine, and as is shown by the story in Genesis of Abraham's intention to sacrifice his own son to his God—an attempt that was only a few months ago carried out in this enlightened country by a man, whom the world declares to be a "brute," a "satan," a "monstrous fanatic," and an insane infanticide.—And the prepuce was chosen as the holy substitute from its representing the most important part of the male-body, viz:

the member of reproduction, while being at the same time dispensable. What wonder, therefore, circumcision should have been gladly adopted by so many tribes and nations, and that it should have been at the same time tinted with a religious hue, to be looked upon as a covenant between the invisible omnipotent supreme powers and their human worshippers. (Genesis xvii, 10-14.) A similar sacrifice to the "great spirit" was offered, as told by Catlin in his work on the Indians of North America, by every boy of many Indian tribes when declared major. But unfortunately for the red-skinned pious brethren they were less gifted with that fiery-poetical, ingeniously inventive power, which heaven lavished on the restless children of the sunny Orient, and were foolish enough to pay their tribute of love to and fear of God with one or two fingers, instead of one quarter of an inch of dispensable prepuce.

2. Hygienic reasons are supposed to have played a prominent part in the origin of circumcision, yet I beg leave to entertain strong doubts as to whether the benevolent intention to promote hygienic measures ever was the prima causa of circumcision. For, notwithstanding the fact that a tendency to establish some sanitary laws is manifest in the Bible, as shown by its dietary regulations, its prohibition of intermarriages with certain blood relations, and its provision of exclusive retreats for those afflicted with a flow from the genital organs (according to the best modern authorities, identical with blenorrhagia) and loathsome eruptions,* yet all these

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*Probably syphilis, which I am rather inclined to think was the disease of King Pharoah and his court after his cohabitation with Sarah, the wife of Abraham, as related in Genesis xii, 14-19, and explained by the Talmud.

The Talmud Gneatan, p. 70, says that Pharoah's disease and that of his court was "————" probably from the Greek *rusis*, or *rupos*, and explains it to be accompanied by a constant flow of tears from the eyes, discharge from the nose and mouth, and a loathsome eruption with vermin creeping on the skin. The disease is there further said to be hereditary, producing in such offspring various diseases, with a parasite in their brain, which gives origin to epilepsy chorea, insanity, etc. This ———— was, according to the absurd superstition of some of the ancient medici of the Talmud, also often produced by the aid of some demons, when the coïtus was performed in an unnatural way. It is any way significant that this disease has its sole origin in sexual connection, and the apprehension of such a disease frightened Abimelech, king of Guerar, into cautious piety, in not taking Rebecca, the wife of Isaac, and *daughter-in-law of Sarah*, into his harem. (Genesis xxvi, 6-10.

regulations were urgently demanded by circumstances at the time, on account of the injurious effect of indiscriminate diet in tropical regions and the ravages of infection by loathsome eruptions and syphilitic discharges among a numerous people living together; or else some superstition or allegorical comment was the basis of those laws, as *e. g.*, the prohibition of eating some animals on account of their possessing certain members peculiar to beasts of prey. The marriage regulations, too, were more of a religious-moral than a sanitary character, as is evident enough from the peculiarities they represent. But how the mind of the Oriental tribes, that seems to be endowed with an heroic aversion for cleanliness, could suddenly be seized with the god-like idea to perform circumcision in order to promote cleanliness, I confess seems to be incomprehensible to me. Yet, thus far, it is certain that the natural effect of circumcision in promoting cleanliness, an effect of which very likely the originators of circumcision never dreamed, propagated and perpetuated this operation, while its antiquity seems to inspire with religious awe all those who practice it.

Operation of Circumcision, as Performed by the Israelites.

Operator.—No medical or surgical knowledge is required of the operator, yet it is remarkable to what perfection the professional circumciser has learned to perform *the operation practically*,—perhaps so, on account of competition they have to fear. At present it is mostly done by a surgeon or physician, or at least under his supervision.

Time of the Operation.—In accordance with the narration in Genesis, it is performed on the 8th day after the child's birth. It is only deferred when the infant's health is precarious and the operation might endanger his life. But the operation is entirely omitted, in case circumcision produced fatal results in two preceding brothers. (Talmud, tract at Sabbath, fol. 19, p. 2.)

Modus Operandi. In order to avoid the danger of cutting away too much of the child's prepuce, the penis is brought by mani-

pulation to erection. The prepuce is slightly drawn over the glans, and a tenaculum is made to encircle the prepuce closely in front of the glans penis. This tenaculum is a wholesome measure to guard against the possibility of cutting into the glans. This precaution is the more necessary since, as cited above, the operation is by no means always performed by a physician or surgeon. With a single sweep by means of a sharp knife, the prepuce, in front of the tenaculum and close to it, is cut off. To avoid injury to the testicles, the cutting is never done from above downwards, but from left to right and somewhat obliquely. The dermoid tissue of the prepuce, by its elasticity, contracts immediately after the operation behind the glans penis, leaving the mucous membrane *in situ*, which is then split off from the meshes by the nails of both thumbs of the operator, on the dorsal aspect of the glans and turned back, so that its reflected edges are brought in approximation with the dermoid tissue behind the corona. This removing of the mucous membrane from the glans penis to the cervix is the only difference between the operation in question and that performed in phymosis. In former days the professional circumcisers used to apply endless bandages, to prevent secondary hemorrhage, which application not infrequently caused rather alarming results. But at present cold water dressing is generally used for this purpose, and in case of secondary hemorrhage the ordinary styptics, as Monsel's solution, alum-iron, charpie, etc., are applied.

Advantages and Disadvantages of Circumcision.

Cleanliness.—No part of the human body is more exposed to uncleanliness and more neglected to be cleaned than the penis, and especially among those classes that are bitterly opposed to the theory of the great Leibnitz, "that the quantity of soap a country uses annually is the surest index of the degree of civilization of that country's people;" it is by no means uncommon to find their prepuce, glans, and especially the cervix beneath the prepuce, dirty, offensive and covered with filth. By removing the prepuce covering the glans, the great reservoir for the accumulation of filth is therefore destroyed, the other

parts are more easily cleansed, injurious matter that might find its seat on these parts becomes now visible and more easily removed, and so cleanliness is promoted *nolens volens*. For this very reason, how many evils have been removed, e. g.—

I. Balanitis and especially posthitis or praeputitis, as the existence of the prepuce is the principal predisposing cause of balanitis, since the glandulæ odoriferæ produce sometimes an oily and lubricating fluid which becomes partially concrete, and frequently proves to be a source of inflammation. The more prepuce there is, the more rapid is the accumulation, and the more difficult it is to prevent it. Dr. Durkee quotes a syphilographer who says: "It was a question with some philosophers of the Monboddo school, whether the prepuce is not a piece of supererogation. It may have its uses in a state of nature, where it may defend the sensitive gland and serve the purpose of a "sheath" in animals. But we are not likely to return to fig-leaves, and I think I may take it upon myself to affirm that at present day and with our costumes, the less we have of it, the better." Ricord also asserts: "The prepuce is an appendix of the genital organs, the use of which I could never divine; in place of being of use, it leads to a great deal of inconvenience, and the Jews have done well in circumcising their children, as it renders them free from one of the ills of humanity. The prepuce is a superficial piece of skin and mucuous membrane, which serves no other purpose than acting as a reservoir for the collection of dirt, particularly when individuals are inattentive to cleanliness."

II. Herpes praeputialis is, of course, impossible with the circumcised. How many troubles do not such individuals escape in consequence of this immunity; since a man having herpes præputialis, or being predisposed to it, is more liable, "ceteris paribus," to contract venereal affections than one not suffering from it, nor having such predisposing tendency.

III Eczema praeputialis, not an infrequent consequence of either chronic blenorrhagia or of want of cleanliness, is entirely prevented by circumcision.

The cure of gonorrhœa is unquestionably facilitated by cir-

cumcision, since it is so frequent an occurrence to find injections, made for the cure of gonorrhœa, finding their way beneath the prepuce, instead of into the urethra, especially when the same are made by the patient himself, and so physician and patient are often deceived, and at the end puzzled to account for the persistent failure of a cure.

IV. *Syphilis.* The statistics of some European hospitals, where all patients, even those laboring under syphilitic affections, are registered after their religious creeds, and the assertion of many noted private practitioners indicate sufficiently that syphilis with the Jews occurs to a less extent than is the case with their uncircumcised brethren. Hereditary syphilis, too, is among them exceedingly rare. The other Asiatic and African tribes, too, who are subjected to circumcision, are reported by many noted travelers to enjoy exemption, almost to immunity, from syphilis. Yet, it would certainly be an inexcusable exaggeration to attribute the exemption, or infrequent occurrence of syphilis, exclusively to circumcision. In the Orient syphilis might be less frequent on account of the system of polygamy predominating there, and consequent exclusion of prostitution; and secondly, the early marriages of the men. The less frequent occurrence of syphilis among the Jews, if such be the case at all, could be ascribed to their modus vivendi, to which must also be attributed their enjoying greater longevity. Infantile mortality also is far less prevalent among them, and hereditary diseases are with them of rare occurrence, as has been emphatically shown by many recent statistical publications in Great Britian, and especially by Mons. Lagoyt, in an article read by him on the 10th of July, 1870, before the Statistic Society in Paris. Mons. Lagoyt claims circumcision to be one of the causes of the advantages the Jewish race enjoys. But, if we may not consider circumcision as a thorough safegard against syphilis, we may surely regard it as a preventive to a certain degree, as in spite of the protection the prepuce offers to the glans penis, the latter is more liable through this very prepuce to abrasions and slight ulcerations, either from compression of the prepuce upon the glans, or from collection of dirt, than an unprotected glans;

while such ulcerated spots are more readily affected by the syphilitic virus than healthy parts. Also, the primary cure of a true Hunterian chancre, or the cure of a chancre upon the corona or cervix, is far better accomplished with the circumcised penis than with one not circumcised.

V. Masturbation is one of the effects of the prepuce, especially a large one, since even the slightest friction of the same on the clothes produces by its high sensitiveness erection of the penis, and so seduces the innocent boy to the crime of onanism; while, on the other hand, when the prepuce is removed, the cuticle of the glans becomes hardened and its sensitiveness greatly diminished. Many individuals circumcised at an advanced period of life, from any cause whatsoever, state that the sensitiveness of their glans has been reduced in consequence to a great degree, and this even in coïtu. Many authors assert that masturbation is very rarely met with amongst Jewish children of tender years, except as the result of their association with children whose covered glans have naturally impelled them to the habit, or of their having been seduced by diabolical companions of their own race to this vice. In certain sections of Europe, onanism has become among Jewish children a common habit, but the only cause of this evil, however, is the Bible, strange as this assertion may appear. The children in these districts are in their earliest youth compelled by their orthodox parents to study the Bible. They do this without discrimination, and consequently these innocent children read many a chapter that treats in unconstrained language of sexual cohabition, onanism, etc., etc. This naturally excites the children's curiosity. They are impelled to ask for enlightment upon these subjects so foreign to their mind from their teachers, by whom they are only met with evasive answers. They naturally then seek another source of information, which is readily found in their older associates, and in this way much is instilled into their minds that has a tendency to cause the cultivation and practice of a gratification so vicious and so hurtful.

VI. Phymosis, which does not prevent the occurrence of chancre even on the glans penis, but often is a great hinderance to its cure, and,

VII. Paraphymosis, a condition that may sometimes strangulate and imperil the head of the penis, are both impossible with the circumcised.

VIII. Nocturnal pollutions are, for the same reason given with regard to masturbation, more apt in the majority of cases to occur with individuals not circumcised than with those circumcised.

IX. Retention of urine from spasmodic stricture is sometimes caused by the prepuce. Dr. Moses, of New York, relates many cases where he could not trace a permanent stricture of the urethra behind the fossa navicularis to any other cause but the constant pressure upon the glans by the prepuce, bending the urethra upon itself at the point named. (N. Y. Med. Jour., 1871, V., xiv.)

Paralysis of lower extremities may be produced through reflex irritation of the glans penis, which irritation is caused by compression of the prepuce upon the glans.

Prof. Lewis A. Sayre, of New York, first called the attention of the profession to this fact. In his report at the meeting of the American Medical Association, held in Washington, 1870, Dr. Sayre described in a very careful manner six cases under his immediate charge, in boys of æt. 5-15, who without any apparent cause had been suffering from paralysis of their lower extremities to such an extent, as to be unable to walk, or even stand erect without assistance. In some of these the knees were flexed, and grave symptoms of the second stage of hip disease had manifested themselves. Many different diagnoses were first suggested, and so in one instance Prof. S. applied electricity and galvanism, hot iron and Indian-rubber muscles, injected strychnia, prescribed iron and many other tonics, but all this without any good result, until the Professor's attention was called, *perchance*, to the condition of his patient's penis. On examination, he found the orifice of the prepuce so contracted that it scarcely admitted an ordinary knitting-needle. The slightest irritation of the extremity of the penis produced the most painful erection.

In another of the cases, a boy of five years, the glans was very small in proportion, pointed and tightly compressed

in the contracted foreskin, and in its efforts to escape, the meatus urinarius became puffed and red as in granular urethritis. Upon touching the orifice of the urethra, the boy became convulsed, and this frequently happened at night, or when riding in the car, since the slightest friction of the head of the organ against the clothes, exciting the penis, would cause erection. In two of the six cases Professor Sayre *tore* the prepuce back, while in the other four he found it necessary to perform circumcision, and in the course of a few weeks the boys recovered completely.

At the conclusion of his report Professor S. remarks: "I am quite satisfied from recent experiments that many of the cases of irritable children with restless sleep and bad digestion, which is often attributed to nervousness, are solely due to irritation of the nervous system, caused by an adherent or constricted prepuce. Hernia and inflammation of the bladder can also be produced by the severe straining necessary to pass the water in some of these cases of protracted prepuce." (Transactions of Am. Med. Association, 1871.)

Dr. Moses, whom I have quoted above, also reports a case under his charge of a boy eight weeks old, who was sleepless and restless, who suffered a great deal of chronic spasms and could not pass his urine frequently, at one time not for twenty-four hours. His head was drawn backwards, and the muscles of the back of his neck were quite stiff, inclining to opisthotonos. After a week's treatment, but without any good result, he found the solution of the case by looking "*perchance*" at the penis. The prepuce was short and slightly constricted, pressing the penis almost back to the pubes. The praeputial opening was puffy and irritated, and not on a direct line with the meatus. In this case, too, circumcision was performed, and all traces of disease disappeared.

Resumé.—Circumcision was called into existence by the divine power of man's inventive genius, in ages unknown, far beyond the reach of human history, and probably for no other reason but to save the innocent babe's life from the blood-reeking blade of demon-like priests and to appease at the same time the fury of ungodly gods that were supposed

to thrive on human flesh and blood. It was then, long after its origin—perhaps during the nomadic migratory epoch—adopted by countless tribes and races in all parts of the world as a child of their own. The Biblical poet even ascribed its paternity to the Hebrew patriarch, Abraham, and the Jews selected it for their national emblem. From the very nature of its origin, circumcision had lost its purpose thousands of years ago, and became superfluous when man's conception of theism became more humane, and the institution of human sacrifices recognized to be ungodly. Yet, during its long existence, it proved to be of great value to those who practiced it and to offer advantages, of which its inventor certainly never dreamed, the most important of which is, beyond doubt, its tendency to promote cleanliness, a hygienic measure nowhere more necessary than in the Orient, and yet nowhere more neglected than just there. For this very reason numerous nations—with blissful ignorance as to the motive of this operation's origin on the one hand, and the human innate instinct to all that is useful on the other—perpetuated it, and circumcision is still performed to this very day by men civilized as well as barbarous.

The hypothesis of some, that circumcision promotes fertility, and that of others, that it rather tends to guard against "*over production*," are so absurd that they surely do not deserve one word of argument.

Whether circumcision is "*eo ipso*" a preventive, even only to a certain degree, against syphilis, as is claimed by some, is a question that must for the present, at least, remain unanswerd. For the origin of syphilis has been until recently dated with the discovery of America, while on the other hand circumcision was looked upon as a purely religious rite, and as such escaped, by its "noli me tangere," investigation. For these reasons there are scarcely any data bearing upon the relation between circumcision and syphilis, by which conclusions could be drawn, and even the few data that are scattered through the labyrinth of the world's history are mostly ex-parte evidences, and therefore unreliable and worse than useless.

From the few points I have slightly touched upon in the foregoing pages, the conclusion seems to me to be inevitable, that circumcision possesses decided and unquestionable merits as a preventive against many evils, some of which I have enumerated above, and as such would certainly benefit men, especially those living in towns and cities under conditions by no means favorable to their moral and physical welfare, where grim poverty is the bitter lot of a great part of the population, in consequence of which marriages in early life are impossible, and men are obliged to crowd in small and perhaps filthy rooms; where the so-called "necessary evil" of modern civilization and the most shocking depravity of unwomanly women—prostitution—is allowed to flourish publicly without shame or fear; where the air is contaminated, water is taxed and bathing is a luxury almost unknown.

But I admit that the operation, as it is still performed by many races, as a religious duty, is not only objectionable, because these people are left in ignorance of the great principle circumcision should teach them, viz: attention to cleanliness, but it is repugnant. For to perform the operation upon an infant eight days old, no matter how delicate it might be (as long as there does not seem to be immediate danger) is, to say the least, cruel and barbarous; and the performance of the same by non-medical men is dangerous, since, in spite of their claim to great efficiency, they are liable to cut away too much of the prepuce and endanger the child's life by primary and secondary hemorrhage.

But I am confident that, under the brilliant lustre of Science's benign rays, shed over the boundless cosmos to illuminate the sublime work of God and guide the god-like genius of man to the hidden treasures of omnipotent Nature, the gloomy and frightful shadows, cast by superstitions of ages gone by over the wide world, will vanish forever. Men will learn to recognize the great principles of science that teach the welfare of the whole human race; many evils will then be done away with, and circumcision might become superfluous.

Acute Hepatitis,

RESULTING FROM THE PRESENCE OF BILIARY CALCULI, FOUND IN THE PARENCHYMATOUS STRUCTURE OF THE RIGHT LOBE OF THE LIVER.

Cure Effected by Operation.

By Mr. Frank E. Artaud, Medical Student, University of Louisiana.

By request, I will endeavor to write an account of a case, which has been submitted to my care since December last.

I am not only prompted by the desire of making known such facts relating to the above as will be of interest to the medical world; but chiefly because the case has been styled by several of the eminent professors of the Medical Department, University of Louisiana, as "*a remarkable one.*"

I therefore think I am justifiable in making a report of the case, likewise a few remarks pertaining thereto, and the method of procedure which I adopted to extricate these calculi.

The patient, named M. Bell, a resident of New Orleans, is 56 years of age, of rather slight frame.

Having enquired into his history antecedent to the present disease, found that he was attacked with *rheumatism* in 1861, resulting ultimately in *rheumatoid arthritis;* I also found on his body the presence of an eruption known as eczema arsenica, corroborating his statement, as he had often intimated that he had taken large quantities of arsenic since attacked with rheumatism.

I inquired whether he had any hereditary predisposition or gouty diathesis: and his statements proved conclusively that he had none.

The hygienic influences to which he was exposed varied largely; and as to his constitution and general health, it has been quite good, until about ten years ago; since when he dates a severe pain not continuous in the right hypochondriac region, radiating positively towards the vertebral column.

His positions in bed have never been altered or interfered

with in any manner; his bowels have always been loose and has had as many as from ten to twenty evacuations per diem.

Present Condition.—When my attention was first summoned to the case (*December* 14*th*, 1880), he complained of an acute lancinating pain, confined for the most part to the region of the right lobe of the liver and according to his statement, deeply situated.

He experienced some oppression in breathing, which increased the acuteness of the pain, especially when a deep inspiration was taken; probably due to the descent of the diaphragm on the liver. A short dull cough of a hacking nature, accompanied the attack; hiccough occasionally. Upon further inquiries, I ascertained that his digestive apparatus was notably injured and that little or no assimilation was taking place.

Physical Examination.—I then resorted to percussion and palpation, and by the former, notable dulness over the whole of right lobe accompanied with a bruit, peculiar and remarkable in its character was revealed.

The latter, namely palpation, enabled me to deduce conclusively that the right lobe of the liver was by far larger than normally. Furthermore, anteriorly an elevation resembling the under surface of an ordinary size saucer, was present, exceedingly prominent and easily circumscribed, measuring three inches in diameter, its position was as follows; viz: the upper edge was two inches and a half below the costal cartilage of the seventh rib; whilst the lower, bordered upon the right lumbar region.

Taking into consideration what I had observed and realized by a careful examination which I instituted again, in order to be more thoroughly convinced, I thought myself justifiable in introducing an exploring needle in the centre of the above intimated elevation. My first attempt proved to be fruitless; but upon again applying the instrument I drew some pus mixed with a little blood.

I felt satisfied that great engorgement was present. The patient complaining of restlessness, I ordered syr. morph.

Dec. 15*th*.—Dejecta examined and tested for bile, and found totally devoid of it—likewise same examination carried out,

Dec. 16th, 17th, 18th and 19th, with the same results; as usual the feces were very liquid, grayish and extremely offensive.

Dec. 19th.—At 7, P. M., I was sent for by the patient, and upon my arrival he stated that he experienced excruciating pains in the right hypochondriac region.—I immediately applied cups and spring-lancet; by 8, P. M., he felt much relieved. Urine tested, bile present.

On the morning of 20th inst., I called again and examined his side, detected fluctuation above the surface of the right lobe of the liver; whereupon, I made an incision varying from ¼ to ½ an inch in length with a thumb lancet, and allowed the pus to escape into a reservoir, which I had provided, having concluded to test it. Accordingly, the ensuing evening I did so and conclusively obtained the reaction that bile assumes with nitric acid. Urine again tested, bile still present.

Dec. 21st.—Feces again tested, and as heretofore, bile absent. The patient's side was next investigated, and the small opening which I made, explored with the probe in order to ascertain, if possible, the nature of the surrounding tissues. To my complete amazement, the instrument sank about an inch or two when it suddenly came in contact with a solid body, firmly imbedded. I made several attempts to liberate this substance, but all my endeavors, thus far, were in vain.

I next deemed it advisable to seek for more such bodies, but in an opposite direction, and as before, my instrument came in contact again with a resistible mass which I succeeded in fracturing, and by means of forceps, obtained some fragments.

Dec. 22d.—Operation.—I called determined to make an incision and cut down to the liver and remove these calculi, knowing that doubtless they acted as foreign bodies in the organ and were the exciting cause upon which the phlegmasia depended and suppuration secondarily. In the meantime I exhibited podophyllin in quarter grain doses every four hours, anticipating hepatic stimulation. Accordingly, with the above determination, I ordered the nurse to administer the anæsthetic and when he was thoroughly under its influence, I proceeded to make an incision from left to right, transversely, from two to

three inches in length; just ½ an inch above the one I had made with the lancet and four inches from the linea alba; also two inches below the costal cartilage of the seventh rib.

The hemorrhage arising therefrom was small and easily controlled. Having divided the several structures; I found that an adhesion had taken place between the hepatic and parietal peritoneum; I introduced my fingers and followed the path which my instrument had pursued, as a matter of course enlarging it.

I at length felt a cluster of calculi firmly imbeded in their cavities, and the contiguous tissue strongly bound down upon them.

By means of a probe-pointed bistoury and forceps, I succeeded in extracting fifteen of these calculi in the space of two hours.

Their size varied from ⅛ to ¼ of an inch in diameter, polygonal in shape, of a brownish yellow color, friable and floating in water.

They were examined by Dr. H. D. Schmidt, Pathologist to the Charity Hospital, and found to contain cholesterin for the most part, glyko and tauro cholate of soda, and those ingredients which usually enter into the composition of biliary or gall stones.

The cavities created by the extraction of these calculi in the liver were thoroughly syringed out with carbolized water, and tents steeped in carbolized oil introduced. In other words, Prof. Lister's antiseptic dressing's were entirely used, and brought forth admirable results.

The patient stated after the operation that he felt much relieved from the uneasiness and pain which he had heretofore experienced, and only complained of the external opening being somewhat sore. Syr. morph. exhibited at night.

Dec. 23.—Patient labored under severe pains confined posteriorly to the lumbar regions. I ordered enemata of opium, twice daily, and applied to the wound iodoform pulv., and hydrarg-chlor. mite. *aa* ℥ii. No symptoms of peritonitis present; temperature normal, pulse likewise.

Dec. 24.—Patient feeling well; pains in the back absent. I

thought it prudent to search for more calculi and shortly extracted five more; the fifth having larger dimensions than those heretofore extricated; wound dressed as before; temperature good; pulse, the same; nitro muriatic acid ordered, ten drops twice daily.

Dec. 25.—Patient doing well; dejecta tested and traces of bile present; temperature normal; pulse likewise; wound suppurating.

Dec. 26.—Patient rapidly improving; wound once more explored and seven more calculi extracted, alike in size to the others. I made sure that none were yet remaining, and continued same dressing. No alteration in either pulse or temperature.

Dec. 27.—Patient improving continually; wound again explored, no calculi to be found; feces tested, bile present; no modification in temperature or pulse; urine tested, only a mere trace of bile.

Dec. 28.—Patient allowed to leave his room; appetite good, assimilation of food apparently taking place; stools containing a normal quantity of bile.

Dec. 29.—Patient doing finely; all functions of the liver restored; temperature and pulse good. During the latter part of January, 1881, the wound began to heal by second intention.

Readers will remark that during the whole of this attack and even after the operation, there was not an elevation of a single degree of temperature, nor alteration in the pulse; and again, I would like to call attention to the fact that jaundice, was never connected with this case.

In February, with Prof. Bemiss' consent, the patient was brought before the medical class and lectured upon in the amphitheatre at the Charity Hospital by the above named gentleman. I would like just here, before concluding, to make a few remarks in regard to the calculi, that I found in the substance of the liver. Doubtless, the majority of medical men will claim that the presence of these concretions in this locality, is probably due to some tortuous fistulary passage, communicating with the bladder, as have occurred in several cases on record. The gall-bladder being the seat of the deposits.

But taking into consideration the symptoms and course of this case, which I have had in close observation, I can safely assume that there was no analogy to those cases in which the gall-bladder has been the seat of the disease.

However, I cannot conceive why calculi could not be formed in the parenchyma of the liver. It is quite evident that all biliary ducts, like all the similar passages, are liable to inflammation of their mucous membranes; which become swollen, and impede, if not arrest entirely, the flow of bile: Such, I am confident has been the case, in my patient, with the trunk forming the hepatic duct from the right lobe of the liver, judging from the symptoms.

The inflammation having been set up in this biliary canal extended as a natural sequence to the tubuli biliferi, and a stiffening of coats thus produced, eventually, the bile was dammed back upon these tubules, and this likewise occurred to the hepatic cells.

Fibrinous exudation, solidified mucous, or insoluble matter precipitated from the bile being natural sequelæ, favored the production of these calculi, constituting a nucleus around which these concretions were deposited.

The morbid effect of the gall-stones was an inflammation which arose from the irritation of their presence, and from their direct pressure or distending force. The result of the phlegmasia was suppuration. Another morbid effect worthy of notice was the obstruction which manifested itself very clearly in this case, as being confined to the hepatic duct; or branches pertaining thereto; the tubuli biliferi being distended as a secondary effect, and finally enlargement of the liver. Furthermore, the size of these calculi would to a certain extent corroborate the above statement, and they would not have been bound down by the contiguous tissue as they were in this case; if a fistulous opening had brought them forth.

Concluding: I cannot conceive that I would be presumptuous at all, in assuming that the concretions which I extracted were formed in the parenchymatous structure of the right lobe of liver; since the necessary pathological agents were favorable for their production.

NEW ORLEANS, March25th, 1881.

A man lives three hours after being shot through both Lungs and the left Auricle of the Heart.

By Jno. E. Duffel, M. D. Donaldsonville, La.

On Wednesday afternoon, about 1¼, P. M., July 28th, 1880, the report of several shots fired in rapid succession towards the post office drew a crowd in that direction; some one cried out for the doctor to hurry, and upon arriving on the scene of action R. I. G. was found sitting in a ditch partly reclining on a friend.

His shirt was full of blood and on tearing that open, a wound was seen near the right axilla and a corresponding exit on the opposite side nearly on a line. The skin marking the entrance of the bullet was blackened by powder, and the exit was as clean as if just made with a bistoury. The patient seemed moribund, his chin resting on the sternum, his face full of dust, gasping now and then for breath, a general pallor and cold sweat covering the whole body; there was no pulse at the wrist, in a word he was shot through the heart, as the by-standers were informed by me.

Patient after remaining a few minutes in the ditch and still giving some signs of life was carefully lifted and carried across the sidewalk and laid on a bed in a shoemaker's house. Here his chest on both sides was covered with an ice poultice, hypodermic injections of whisky were given, then of ether and finally of sulphate of morphine and atropine combined, and repeated at regular intervals.

Finally, breathing began to be more regular, some color appeared in his face, vomiting ceased, the pallor was gradually dispelled and all felt relieved when the dying man opened his eyes.

He was taken home on a litter at about 2:30, P. M.; pulse 120, respiration 40 to the minute.

3:30, P. M., pulse 120, respiration 40; no reaction; pallor increasing; great restlessness and jactitation, and carrying con-

tinually his right hand to his left side, saying that all his pain was there.

At no time was the external hemorrhage profuse.

Patient remained perfectly conscious, surrounded by his family and friends to whom he spoke. The hypodermic medication and ice poultices were renewed, but all to no effect, his breathing became slower and slower, he turned over on his right side and resting his chin in the palm of his hand, drew his leg up and died at about 4:30, P. M., without any struggle, and without any one noticing it.

Post-mortem one hour after.—The following is the testimony of Dr. Beauville Claverie: "This is to certify that I was this day summoned by the Coroner of the parish of Ascension to assist him in making a post-mortem examination of the body of R. I. G., found dead at his house on Rail Road Avenue, in the town of Donaldsonville. On examination of the body I found that said R. I. G., received a gunshot wound as follows: The ball entered the right side of the chest in the axillary region, causing a fracture of the third rib, penetrating through the upper lobe of the right lung, thence through the left auricle of the heart, and upper lobe of the left lung, and continuing its course, came out between the third and fourth ribs of the left side. The pericardium was filled with blood, therefore, I come to the conclusion that said R. I. G., died of internal hemorrhage."

REMARKS.—The testimony in this case shows plainly that the combatants when the first shots were fired: were not more than five or six feet apart, besides the nature of the wounds as shown in the beginning of this report confirms it beyond a doubt. The weapon used was an improved double action Tranter, calibre 55, and the first shot was the fatal one as the wounded man showed by his zig-zag and unsteady motions and partial loss of strength which obliged him to use both hands in trying to cock his pistol.

Reviewing the medical literature of gunshot wounds of the heart we are more and more amazed to see a man living three hours after being shot through the left auricle of the heart,

regaining his consciousness, and conversing with his family and friends.

In an article by Marjolin, he cites a case reported by M. Latour, in which a soldier was wounded in the thorax. A severe hemorrhage which ceased only on the third day made them despair for a while of his life. A profuse suppuration followed the hemorrhage and debris of a fractured rib were removed at several times. The wound healed about three months after; the patient made a good recovery and only complained of frequent palpitations of the heart, which annoyed him considerably for three years, they then became less frequent for the three following years; and finally six years after the wound the man died of some acute affection, and M. Maussion, surgeon-in-chief of l'Hotel Dieu d'Orléans, made a post-mortem examination of the body in presence of the students of the Hospital and found the bullet imbedded in the right ventricle. Saviara in the same article cites the case of a man who received a sword thrust through and through both aorta and right auricle and who lived eleven days after, and died suddenly from hemorrhage in the thorax and pericardium.

Vidal de Cassis says, that Paré cites a case of a man wounded in a duel getting over two hundred paces of ground in hot pursuit of his adversary whilst he had a wound in his heart in which you could stick your finger.

In an article by the lamented Dr. John D. Jackson on the Wounds of the Heart and Pericardium, we see that:

Fischer collected	452	cases, of which	72	recovered.	
Jamain	"	121	"	10	"
Zanelti	"	153	"	9	"

Fischer's 452 cases are divided as follows: 51 pericardium; of heart 401, subdivided as follows:

123 wounds of	right ventricle,	or 27.2	per 100.
101 "	left "	22.1	" 100.
28 cases right auricle.		26 cases of two ventricles.	
13 "	left ventricle.	7 of partition walls.	

Wounds of the heart are mentioned by Homer in his recital of the great battles during the siege of Troy, and Benivenis

(who died in 1503) was the first to record a wound of the pericardium, and the first cure of the wound of the pericardium is chronicled by Cardenas in 1501.

To the great Ambrose Paré first belongs the honor of describing a penetrating wound of the heart with a microscopic examination.

There is no case on record of wounds of either auricle which have been cured.

Still later we read of the very singular case of a man shot through both lungs and the right auricle of the heart with a Spencer rifle, quarter ounce bullet, running sixty yards before he fell; with a pistol in his right hand, and his left hand upon his breast. He sat up once or twice by propping himself with his hands upon the ground, got upon his hands and knees once or twice, but soon fell over, spoke a few words and lived about one hour after having received the wound before he died. [Not being the possessor of a copy of the "Medical and Surgical History of the War," this report is not so complete as it ought to be.]

In conclusion, we will state that the syncope in the case of R. I. G., immediately after the wound, evidently caused a clot to form and plug up the orifice of the bullet and allowed him three hours of life which he never would have had, had he been suddenly taken up and carried home; and that wounds of the heart are not necessarily fatal, although those of the auricles are absolutely so.

Case of Embolism of Lower Abdominal Aorta; Iliac and Femoral Arteries and Renal Artery; Gangrene and Death.

By A. PETTIT, M. D., New Orleans.

Mrs. M., aged 38, a widow, a native of Ireland, resident of this city since childhood, and the mother of five healthy children. Her husband died of epilepsy, for which no specific cause could be assigned. She had, heretofore, enjoyed good health,

with the exception of several *severe attacks of rheumatism*, and recently, shortness of breath and *palpitations of the heart*. For several days prior to her late attack, she had been confined to bed from a severe cold, which was contracted during, and resulted in arrest of menstruation.

Feeling somewhat better on the morning of January 5th, she got out of bed, but no sooner had her feet reached the floor, than she experienced a great shock in the hypogastric region, "as though something heavy had fallen from above and lodged there." This was followed immediately by loss of power in the lower extremities and most excruciating pains, described variously as tingling, burning, numbness and deadness in the parts. When I saw her an hour or two later, she was restless in the extreme; her countenance expressive of great suffering and anxiety; respiration hurried and sighing; heart's action weak and irregular with slight bruit; pulse correspondingly feeble and intermittent. The lower extremities were cold up to the hips, but unnaturally sensitive to touch below the knees.

On the following day a bluish spot an inch or more in diameter appeared upon the outer aspect of the right foot near the ankle, and twenty-four hours later a dark red band a quarter of an inch in breath and two or three inches in length showed itself upon the outer and anterior surface of the same limb midway between the knee and the ankle and extending obliquely upward and inward; the surface of the skin along this discolored line was dry and parchment-like and exhibited numerous intersecting red and dark lines, marking the situation of minute blood-vessels in which the blood had ceased to flow. No pulsation could be felt in the external iliac and femoral arteries. Both legs soon became œdematous, the left blue, moist and puffed, but not boggy; the right, on the contrary, marked only by an increase in length and breadth of the dry band already mentioned. There was also a slight return of warmth in the latter, but no pulsation in the corresponding femoral artery. At one time the former began to slough, the heel, sole and toes, however, assuming a dry and shrivelled condition.

Without going further into details of the daily changes, let

it suffice to say that the patient lived for *seventy-one* days, during most of which time she took food and drink without distaste, but was never free from great suffering, except when under the influence of morphia. Seven or eight days before death she was seized with sudden and severe pain in the right lumbar region, like that felt at the outset in the legs. The significance of this was not recognized at the time, but was fully explained by the *post-mortem* discoveries.

Drs. Holliday, T. G. Richardson, Wm. H. Watkins and Brewer, saw the patient with me from time to time. The autopsy was made by Dr. A. B. Miles.

The characteristic pathological appearances were as follows: The heart, although not hypertrophied, exhibited marked changes in the left auriculo-ventricular valve, which was much thickened, nodular, and so rigid that the index finger could not be passed, the orifice being reduced to a mere button hole. There was no blood clot in either side.

The abdominal aorta, from the origin of the inferior mesenteric to the bifurcation, was occupied by a firm fibrinous clot, which extended into the iliac arteries, and, upon one side, some distance into the femoral. The plug was evidently not so large but that a considerable amount of blood could pass to the lower extremities, but not with sufficient force to produce sensible pulsation. The walls of the aorta, corresponding to the clot, were slightly reddened and roughened, but otherwise there were no evidences of inflammation, acute or chronic.

The right renal artery was completely closed by a clot extending from its origin to its division in the hilus of the kidney.

Iodoform.

By S. M. ABBAY, M. D., Centreville, St. Mary's Parish, La.

A few years ago carbolic acid met with quite a run with the profession. The same may be said of iodoform at this time.

The writer was induced to use it after reading the article in the United States Dispensatory of 1877. My first case was gonorrhœal orchitis. As it succeeded so well, was induced to

try it with others with marked success. I think it far superior to strapping. Last winter was asked to take charge of a case of eczema capitis of two years' standing; subject, a negro girl, age 10 years. After washing the parts with castile soap and water to soften and detach the crusts, applied the following: ung. oxid. zinci, at night; as it acted as an irritant, stopped it. We had very cold weather at that time. Applied a thick coating of what is called French tallow. The internal treatment was 10 drops of syr. iod. ferri, three times a day. On removing the tallow, found the scalp no better. Concluded to try the following: ℞. Iodoform ʒi, vaseline ʒi; M. sig.: Apply night and morning. The scalp began to heal and I discharged the case two months ago. My reason for publishing the above is, that in reading "Duhring's Diseases of Skin," published in 1881, he does not mention iodoform in his treatment of eczema capitis. Have also treated successfully a case of chancroid and one of balanitis with the above prescription.

CORRESPONDENCE.

MARTHAVILLE, La., April 20th, 1881.

Editors New Orleans Medical and Surgical Journal:

In my brief communication published in the MEDICAL AND SURGICAL JOURNAL for March, I simply designed to call attention to what I deemed a matter of great importance to the profession and the people, hoping that some of your readers might be induced to test the remedial powers of heat, and determine, each for himself, whether the broad claim I therein made for it were well founded or not. Further than this, I had no thought of occupying the space of the JOURNAL or the time of its readers.

However, I have since received several letters from physicians resident in different parts of the country, asking for further discussion of the matter through the same medium. Among these was a sympathetic brother, who sent me a note of condolence, in regard to the editorial criticism which so closely followed my letter, and which he doubtless considered as deci-

sive as it was sharp. I now "stand up," for the purpose of showing him that some reasons may be given "why sentence of death should not be passed upon" my hypothesis, provided you will allow me to briefly reply to the editorial comments thereon. It was said that my "views are quite at variance with the doctrines generally accepted by medical men on the nature of the febrile process and its effects upon the animal economy."

This is very true, but allow me to ask if the generally admitted helplessness of the medical profession in the presence of many fevers—typhoid, typhus and yellow fever, for instance—is not a good reason for suspecting the validity of the accepted theory, if not absolute proof that we are laboring under a mistake somewhere. Be the theory what it may, the practice is certainly not very efficient; and so far as it is efficient, if my observations have been correct, it can boast of no success outside of those remedies that possess the property of adding to the heat of the animal economy: cinchona and its salts, for instance. As related to this matter, I might add that the number of practitioners who fearlessly administer quinine during the hot stage of fevers increases, rather than the reverse.

Again I quote: "An elevation of bodily temperature above the normal standard is regarded as indicative of morbid action dangerous in direct ratio to the exaggeration, and calling for measures to repress or counteract the process."

Let us look into this theory from another stand-point. May not the elevation of temperature be in direct ratio to the morbid action (or more properly to the magnitude of the morbid cause) without necessarily increasing the danger? It seems reasonable to me, to suppose that such morbid cause is the real source of danger.

Experiment will certainly settle this matter with us all. Suppose we take a case of fever showing 106° F., and subject it to a hot air-bath of 110°; or if we choose, 120° F.; now if no evil results, but almost an immediate amendment, it seems to me that the idea of heat in fevers being the source of danger, must be abandoned at once. I have been, for years, testing

this matter and have never seen the slightest injury result from the practice.

As to the practice of *repression* indicated in the last quotation, you will pardon me if I express the belief that it is unphilosophical in fact, and painfully unsuccessful in practice. This practice has appeared in every possible shape; "been weighed and found wanting" in beneficial results generally. Erysipelas furnishes a good illustration; the repressive practitioner frequently finds his cases very ugly, while under the expectant and eliminative treatment the disease is seldom serious; and, if I mistake not, it is frequently caused by lowering the vitality of the skin by the application of cold water in the surgeon's efforts to *repress* traumatic inflammation. It may be true that "The cool and wet treatment in typhoid, scarlet and yellow fevers has been found grateful to the patient," etc.; but if favorable in results, why is it that so many of the best medical men deplore their inability to do more than play the part of educated nurse in these diseases?

The gratefulness of the cooling treatment is no proof that it is beneficial, or even harmless, as any practitioner will admit, in view of the large number of cases of fever, consumption, etc., which he sees produced by yielding to the seductive and cooling breeze while heated with exercise.

Again I quote: "The idea of counteracting abnormally high temperature by the application of more heat, certainly looks like the doctrine of similia similibus curantur." Well, for myself, I must say that I would be happy to see some law established, that would be to us an unvarying guide in the treatment of our ills, and make our practice a science instead of an empirical patch work. And again: "If practiced at all, we think the dose ought to be infinitesimal, for the sake both of safety and consistency." Now, if we look upon the symptoms of disease—and heat is a very prominent one—as the essential evil to be combated, it must be admitted that their augmentation would be very poor practice; but suppose we should learn that most of these symptoms are but the struggles of an embarrassed organism, to free itself from some

morbid agent impeding its healthful functional action. Would it not be quite consistent to receive a hint from nature, and be content to assist in the cure already begun, by adding to the curative forces which we see in motion?

Let us divide the phenomena of diseased action into positive and negative symptoms. The positive symptom is the instinctive *effort* of the organism to remove or destroy an impediment to its healthful action, while the negative symptom exhibits the *effect* of the morbid agent upon the integrity of such organism. The positive symptom is illustrated in the hot stage of fevers; the negative in the cold. The one is salutary; friendly to life, and furnishes the imitative for the physician to follow up; the other is pernicious, and tends to dissolution. It seems to me that here is the Syclla where many of our life-boats are wrecked, just opposite to where those of the Homœopaths go-down. Between the two, I believe, will be found the rational channel into which we shall all eventually steer.

The Allopath will cease to indiscriminately combat symptoms, while the Homœpath will pause to determine whether the symptom, which he is about to augment, is a recuperative or destructive one; whether it means death to the disease or to the patient.

Here, then, we have the occult law upon which "similia, similibus curantur" rests; and which, if it be a law, must frequently forbid the addition of "like to like" in the treatment of disease. It is the augmentation of the *vis medicatrix naturæ;* the addition of a like force to a curative force already in operation.

Attention, progressive medical men! Just beneath the surface upon which we now stand lies a grand truth yet to become the corner stone of the Temple of Rational Cure; of scientific medicine. Hippocrates, Stahl, Broussais and Hahnemann, have all, from a great distance, seen its dim outlines. Let us dig it up to-day and strive to *be*, what we have so long striven to *seem*—conservators of the public health.

J. N. Lee, M. D.

Current Medical Literature.

THE RELATIONS OF THE OVARIES TO THE BRAIN AND NERVOUS SYSTEM.

At the semi-monthly meeting of the Academy on the 16th of December, Dr. Alexander J. C. Skene, of Brooklyn, professor of diseases of women in the Long Island College Hospital, read a paper with the above title. The various problems connected with this important and interesting subject, he said, he had no hope of solving, but he would at least make some humble efforts to enter upon their investigation and elucidation. In the first place he alluded to the physiological relations of the ovaries to the other sexual organs, and discussed the connection between ovulation and menstruation. The conclusion which he arrived at was that the independence of the two which seemed to have occasionally been observed was the rare exception, and not the rule. "All that we know of the influence of the ovaries in this particular," he said, "points to the probability that these organs are the prime movers in the sexual system." In treating of the regular sequence of actions in this connection, he pointed out certain analogies in the processes of nutrition and the functions of the nervous system.

He then quoted Maudsley on the important influence which the ovaries exerted on the brain and nervous system, and said that with the weight of such authority to support him he was quite ready to agree with Virchow in the statement that it is the ovaries which give to woman her peculiar characteristics of body and mind. There are certain capabilities of the brain which, he believed were never developed in the absence of the ovaries, and he had himself seen two instances in which, the ovaries being lacking, the women were of a decidedly masculine type. Some authors were opposed to this view. Thus, Goodell had stated that the influence of the ovaries was greatly overestimated. Beyond sterility and the absence of menstruation, he thought that the removal of the ovaries did not render the individual any the less a woman. Peaslee, Battey and others were of the same opinion. The evidence presented by cases in which Battey's operation had been performed, however, instead of being uniform, varied greatly in different instances. In one case of Dr. Thomas's the sexual feeling, which before had been passive, became aggressive after the operation, while in one of Dr. Pallen's, on the other hand, an excessive sexual excitability and an uncontrollable desire for self-pollution were cured by the operation. In considering the condition of those in whom the ovaries had been removed we should not forget to make certain allowances for the force of habit from

long exercise in the system. It was easy for a person who had become blind to talk intelligently of the appearance of surrounding objects, but it was impossible for an individual who had been born blind to form any correct conception of the same. If the uterus and vagina were wanting, and yet the ovaries were present and well developed, the individual would undoubtedly be a perfect woman, so far as all the distinctly feminine characteristics were concerned. Perhaps the strongest point in favor of the importance of the office performed by the ovaries, was the fact that they sometimes took the place of the uterus, as demonstrated by the phenomena of vicarious menstruation and abdominal gestation.

The emotions depended to a considerable extent on the sexual organs, and the ovaries, on the other hand, were greatly affected by the emotions. Thus, grief, anger, or fear, not infrequently arrested menstruation, and, in all probability, ovulation. Again, if the ovaries were imperfectly developed or functionally inactive, the brain and nervous system were not fully and normally developed. In twelve out of sixteen women, whose cases he had studied in an insane asylum, he had found that there was something wrong about the ovaries; and hence he had come to the conclusion that defects in the ovaries were an important element in the causation of insanity, although he did not lose sight of the unquestionable influence of hereditary tendencies also in this connection. In these cases the mental derangement had made its appearance about the age of puberty, and nutrition had not been materially affected, but still it was possible that the sexual imperfections were merely a part of a general inferior development.

Derangements of menstruation had been justly charged with causing nervous disorders of greater or less severity, but there was much still to be learned in regard to this point. Thus, the subject of ovarian dysmenorrhœa was by no means clear. The character and location of the pain seemed to indicate the ovaries as the seat of trouble, the pain being of an aching character, and seldom intermittent. It might precede the menstrual discharge, and generally continued through it and for a short time after its cessation. Pain in the ovaries at the menstrual period, and not at other times, was a recognized condition. The trouble was presumed not to be of an inflammatory nature from the fact that the pain was not constant, and that there was no tenderness of the ovaries on palpation. When the pain preceded the menstrual flow, it was probably connected with the function of ovulation.

Diseases of the ovaries in which there was a neoplastic element did not usually affect the brain or nervous system; and this was, perhaps, because they were, as a rule, unilateral and not accompanied by pain. Inflammatory affections of these organs, on the contrary, had a very marked influence on the nervous system. Dr. Skene said that he had seen all varieties

of uterine disease present without producing any such effect; but he had seldom observed any serious disease of the ovaries (other than neoplastic in character) in which this was not involved to a very considerable extent. Ovaritis and displacements of the ovaries were the affections which most frequently caused cerebral and nervous disturbance. In the condition known as ovaritis it had not, indeed, been clearly made out that there was actual inflammation of the organ; but as certain characteristics of the inflammatory process elsewhere were observed, it was advisable to employ the term for the sake of convenience, at all events. When ovaritis was present, pain on defacation, especially if the bowels were at all constipated, was a very common symptom. This pain was of a different character from that due to hæmorrhoids or fissure of the anus, and somewhat resembled intestinal colic. In many cases nausea and hysterical symptoms were also produced by the act of defecation, and these were apt to be more marked if the left ovary was the one affected. Prolapse of the ovaries, as a rule, gave rise to the same symptoms. This displacement was generally due to displacement of the uterus; but so long as the ovaries were not tender, and their relations to surrounding organs were not materially altered, the condition might occasion but little trouble. In different cases of prolapse of the ovaries, the amount of suffering experienced varied greatly, and this, Dr. Skene thought, was due to the difference in the condition of the organs. When there was laceration of the cervix uteri, with eversion, the ovaries were frequently affected, and when a displacement once commenced it was very apt to be progressive.

Pelvic peritonitis accompanied with ovaritis afforded some evidence as to the influence the ovaries exerted upon the nervous system. If there was pelvic peritonitis without ovaritis, there was little or no cerebral or nervous disturbance; but if the ovaries were involved, a marked effect upon the brain was frequently noticed. He had seen four cases of acute mania coming on in the course of pelvic peritonitis, and in three of them had discovered distinct evidence of ovarian disease. When the local trouble had come to an end, the mania and all other mental symptoms completely and finally dissappeared. He had also seen two cases of cancer of the uterus in which acute mania had occurred. For a long time there was no mental disturbance whatever; but when, at length, the broad ligaments became affected (and consequently the ovaries) there was much more pain and nervous excitability, and finally mania supervened. In one of these cases he had had the opportunity of making a post-mortem examination, and had found one of the ovaries completely surrounded by cancerous deposit, although it was not determined whether the organ itself was actually the seat of disease. The other ovary it was impossible to distinguish in the disintegrating

cancerous mass which occupied the portion of the pelvis in which it would be normally treated. Dr. Noeggerath had found, from a large number of autopsies, that lesions of the ovaries were frequent; but, unfortunately, we knew comparatively little of diseases of these organs, or how to diagnosticate and treat them.

Dr. Skene then alluded to Charcot's researches in regard to hystero-epilepsy, and regretted that so unfortunate a term had been chosen to designate the affection, since the uterus was, as a rule not at all diseased. The condition of the ovaries in such cases was of great importance, but up to the present time was but little understood. The fact that sudden pressure on the ovarian region sometimes arrested the convulsions showed that ovaritis was probably not present. Dr. George Engelmann, of St. Louis, in his paper on hystero-neuroses, published in the second volume of the transactions of the American Gynæcological Society, had presented the most rational discussion of the subject that had yet appeared; but he was not willing to subscribe to Dr. Engelmann's statement that in all these cases there was disease of the uterus. If the uterus and ovaries were both affected, it rendered it more difficult to determine just where the origin of the disease lay.

In any case of cerebral or nervous disturbance it was necessary to determine, *first*, whether the ovaries were affected, and, *second*, how far the affection of the nervous system was dependent on this. The influence of displacements of the ovaries it was easy to make out; but this was not true of other conditions of the organs. The diagnosis of ovarian dysmenorrhœa also was usually not difficult; but to trace such grave disorders as epilepsy and nymphomania to the condition of the ovaries was a very different matter. To do this satisfactorily, and, by removing the ovaries, put an end to the disease, was one of the greatest successes that could crown the gynæcological surgeon; but to attribute the affection to the condition of the ovaries, and then, after having removed the organs, find that there was no improvement whatever, was one of the greatest failures that could be met with in the whole domain of medicine and surgery.

The uncertainty in diagnosis which belonged to affections of the ovaries has been fully demonstrated in the various cases in which Battey's operation had been performed. When the symptoms appeared only at the time of menstruation, however, the diagnosis was usually easy. Pelvic pain and tenderness, independent of the ovaritis, were sometimes mistaken for evidences of ovaritis. These might be due, for instance, to the presence of the remains of old inflammatory processes in the pelvis; and the true diagnosis was sometimes accompanied with very considerable difficulty. In some cases, again, the most serious nervous disturbances seemed to be caused by the pressure of old inflammatory adhesions upon the ovaries, although the organs

themselves were free from disease. This was well shown in a case related by Dr. Battey at the late meeting of the American Medical Association, in which he opened the abdomen to perform the operation known by his name, but found the adhesions so numerous and firm that he desisted from removing the ovaries. Afterwards the patient's condition was very materially improved, however, and this would seem to be explained by the fact that during the operation Dr. Battey had broken up the adhesions to such an extent as to remove a great part of the pressure from the ovaries.

It was not necessary to say much on the subject of treatment on the present occasion. It was one in which the gynæcologist and the neurologist were equally interested, although the tendency unfortunately was to treat one phase of the trouble exclusively. The great majority of cases required both local and general treatment. For amenorrhœa due to defective ovarian influence the best local treatment (and not infrequently the only one required) was electricity. In ovarian neuroses and congestion and irritation of the ovaries this agent was generally beneficial, but in inflammatory states and displacements its effects were disastrous. Other local measures which might be employed were blisters and the application of iodoform, tincture of iodine, etc. As to general remedies, the bromides were of great service in many cases, and Dr. Skene's custom was to give them in full doses until their constitutional effects were observed; after which he thought it best to give them intermittingly and in much smaller doses. Conium was used in the same way. It was a matter of great importance, however, that the patient's strength should be kept up by the administration of suitable tonics at the same time. Opium, chloral, and alcohol often afforded great relief; but of course it was necessary to give them with great caution, on account of the danger of the patient's becoming habitually addicted to their use.

Dr. Skene brought his paper to a close by the narration of a few cases illustrating some of the points touched upon in it. The first was one in which the uterus was rudimentary, but the ovaries perfectly developed, and the sexual characteristics consequently normal. The second was one of dysmenorrhœa, due to diseased ovulation. In the third menstruation was attended with marked and peculiar nervous symptoms, and it was found that the left ovary was enlarged and prolapsed. In the fourth there was prolapse of the ovaries in connection with retroversion of the uterus, and the nervous symptoms which were apparently due to the condition promptly disappeared when it was relieved by local measures, without any resort to constitutional treatment. The fifth case was one of epilepsy associated with inflammation of the ovaries, in which the pain ceased when menstruation commenced.

In the discussion which followed the reading of the paper

Dr. Allan McLane Hamilton spoke of organic diseases of the nervous system, which he believed originated from diseased conditions of the ovaries, and mentioned particularly the case of a lady whom he had seen with Dr. Mundé, in which there was prolapse of the ovary associated with epilepsy and attacks of vomiting, and where the result was lateral sclerosis of the spinal cord.

Dr. Mundé, although he agreed, in the main, with all that Dr. Skene had said, thought that the agency of the uterus in causing nervous troubles should not be overlooked. He had frequently seen neurotic symptoms in connection with an enlarged and indurated uterus, where no trouble whatever could be detected in the ovaries, and where these symptoms entirely disappeared after the uterus had been restored to its normal condition. In the course of his remarks he related a case which exhibited the influence of the ovaries upon the nervous system in a very striking manner. A lady who had previously been under treatment for some uterine trouble met with a fall, which produced a displacement of one of her ovaries into Douglas's cul-de-sac; and shortly afterward she began to suffer pain in the head, and became very irritable, morose, and melancholy—a state of mind utterly foreign to her natural temperament. When the prolapsed organ was restored, the cephalalgia and mental trouble entirely disappeared.

After remarks by several other gentlemen, Dr. Skene spoke briefly on some of the points brought up, and then, on motion of Dr. J. Foster Jenkins, of Yonkers, it was resolved that a further discussion of the paper should be made the special order for some future meeting of the Academy.—*Boston Medical and Surgical Journal*, Jan. 6.

DILATATION OF STOMACH MISTAKEN FOR AN OVARIAN CYST.

The Detroit *Lancet* contains in a recent number a report of a case which furnishes a striking example of the manner in which it is sometimes sought, by a specious representation, to palliate grave blunders. The report is by A. Reeves Jackson, M. D., of Chicago. The case was that of a woman whom Dr. J. was called to see in consultation with a Dr. B.; 22 years of age; married a little over a year; had been delivered three months previously of a still-born child at full-term; nothing peculiar about the labor. On quitting her bed ten days after delivery, she noticed an enlargement in the right iliac region, which rolled about when her position was changed. Appetite keen, bowels obstinately constipated, stools scanty, frequent attacks of vomiting after eating. She lost flesh rapidly, and in two and a half months was reduced from 145 to less than 100 pounds. Dr. Jackson found her with abdomen very much enlarged, fullness being tolerably uniform, although the greatest distention was in an oblique direction from the left hypo-

chondriac to the right iliac region. The superficial vessels were not prominent, nor was the umbilical depression effaced. Palpitation showed enlargement to be soft and yielding, no hardness being perceptible in any part; uterus normal in position and size; no fluctuation, no outline of tumor or cyst. He diagnosed ascites, but Dr. B., the physician in charge, thought it was an ovarian cyst. The abdomen was tapped and two or three ounces of a dark colored fluid, of sour odor and reaction, and containing portions of partially digested food, were drawn off. Dr. J. remarked "in a jesting manner," that possibly the stomach had been tapped. Dr. B., however, considered that accident out of the question, as he had inserted his trocar "three inches below the navel," His explanation of fluid of that nature being found in that locality was, that the patient had an ulcer of the stomach, and that the contents of that viscus had escaped through that opening into the peritoneal cavity!

The following day Drs. B., Steele, Moore and Jackson proceeded to perform ovariotomy. The room was heated to 78°, and saturated with carbolic acid spray in the most approved manner. The patient having been etherized, Dr. B. made an incision "in the median line about four inches long, midway between the umbilicus and pubis." What was supposed to be the peritoneum having been duly reached, it was incised, and six or eight quarts of fluid mixed with seeds, pieces of meat, potatoe, rice, etc., and giving off a rancid and sour odor, were drawn off. It now dawned on the minds of the learned quartette that the stomach had been entered. The opening was *therefore enlarged to about four inches* and the operator's hand passed in, but he could discover no obstruction or thickening about the pylorus. The uterus and ovaries were normal. The unfortunate woman expired at midnight.

The specious representation, which we refer to the report as containing, consists in Dr. Jackson's remarks on the case. He says: "I have been induced to relate the particulars of the foregoing case for several reasons: (1) because of its unusual character; (2) its history demonstrates the great difficulty which may be encountered in the diagnosis of abdominal swellings; and, (3) it shows how very little reliance is to be placed, sometimes, upon the statements of patients concerning the early history and progress of their ailments." He says that neither Spencer Wells, Peaslee, Barnes, Thomas, Hewitt, nor Scanzoni make mention of the possibility of mistaking a distended stomach for an ovarian cyst.

The Canada *Medical and Surgical Journal* closes a scathing criticism of Dr. Jackson's article in the following manner, which we think will be conceded to be a fair-minded comment on this fortunateiy unique case:

The conditions present did *not* simulate ovarian cyst, and should never have been mistaken for it. Vomiting a marked

feature, rapid emaciation, the enlarged, but soft abdomen, in which no tumor could be felt, and above all, the description as given of the outline and location of the enlargement, would suggest to any one who had ever seen such a thing—a greatly enlarged stomach. Is it not strange that no one suggested the stomach pump to aid in the diagnosis of such an apparently doubtful case? We think the history of ovariotomy affords no such example. To tap the abdomen, draw off grains of rice and bits of potato, and then do gastrotomy to see where they came from! It is remarked that neither Spencer Wells, Peaslee, Barnes, Thomas, Hewitt nor Scanzoni make mention of dilated stomach as being possibly mistaken for ovarian tumor. For the simple reason that none of them had ever experienced the slightest difficulty in distinguishing cases presenting such entirely different clinical features. Such cases as the above are not creditable to the science of medicine, and we hope it will be long before its annals will find for it a fellow."—*Michigan Medical News*, March 10, 1880.

INHIBITION OF IDEATIONAL CENTRES, OR CEREBRAL TRANCE. A CASE.

By T. L. Wright, M. D., Bellefontaine, O.

The following case of a prominent minister in a leading denomination of Christians—a gentleman well known to the writer, a man of learning and ability, is believed to be one of great value as bearing upon many questions appertaining to mental imperfections. Having received the facts at second hand, it was thought desirable to have an authoritative statement of them from the gentleman in question himself. In answer to a letter of inquiry, the following statement of the case was received by letter. The statement is so full and satisfactory, that it is thought best to give the words of the letter verbatim:

———, November 25th, 1880.

T. L. Wright, M. D., *Dear Sir*:—Yours of the 23d instant received in due time. Pastoral duties prevented an earlier reply.

The facts in my *singular experience*, of which you make inquiry are, so nearly as I can recollect, about the following:

1st. I wrote and preached a sermon from a very familiar text, and in two weeks afterwards wrote and preached a second sermon from the same text *without any recollection of the first*, only reminded of the first when I went to put away the second in a drawer kept for my sermons, where I had put the first one two weeks previous.

2d. It was immediately after a severe "spell" of several weeks of "*general debility*," and before I had entirely recov-

ered, and during which sickness I was "flighty" most of the time.

3d. The second sermon was a considerable improvement on the first, as I saw from a comparison of the two manuscripts.

4th. I was then 32 years of age, and had been preaching for five or six years.

5th. Before, and for a year or two afterwards, I was afflicted with almost constant and severe headache—a sickness that troubled my mother very much.

6th. Since that event my memory has not been so good as before; but every other mental faculty has greatly increased, all headache has left me, not having any save a slight one once or twice, perhaps three times a year.

7th. I am much stronger, physically, than ever before; mind and body—except the memory as stated—seeming to be increasing in strength.

8th. All tendency to "flightiness" has left me, which always accompanied any sickness I had.

9th. I can now endure hours of mental labor, and feel no inconvenience, save a little "weariness of the flesh."

10th. I can memorize only leading thoughts of a discourse easily—the filling up with great effort—and whilst I have exceeding great delight in using any other intellectual faculties, yet I have an *utter distaste* to memorizing.

I have often thought of the matter, and tried a solution of the phenomenon, but never could get a satisfactory solution.

At first I was almost overwhelmed with gloom, for I feared I had lost or was threatened with the entire loss of memory.

Very respectfully,

W. G——.

This gentleman, many years ago, was afflicted with epileptiform spells, the unconscious period lasting, not unfrequently, several days. He had only two or three attacks a year.

This sermon was written and delivered, no doubt, while in a state of so-called cerebral trance, occurring vicariously for the epileptiform seizure.

It is probably not desirable that any extended application of the case should be made here. A single remark in that direction only will be indulged in.

In cases of criminal prosecution, where mental defect is set up in defence, it has been a custom to claim that, if epilepsy, once present, had disappeared for a considerable period of time, that fact goes to show that the mental state had become sound, and that in such a case the defence of insanity is not valid. *The exact opposite* is the correct assumption; namely, if epilepsy has disappeared, the presumption is very strong, that some other neurotic state has been substituted for it; and the probability of an unsound mental condition is *increased* by the absence of the epilepsy. For it is becoming established that, in all those cases of unstable equipoise among the nerve

centres, *which are inherited*, or are *constitutional*, there is no hope of a final equilibrium ever becoming permanently established. Such a constitutional organization is not opposed to the idea of most brilliant mental achievements; but it is opposed to the idea of steady, sober, and equal judgment at all times. In such cases medicines cannot minister to minds diseased. Constitutional defects cannot be eliminated from the human mind and be replaced with sound faculties by therapeutical appliances.—*Cincinnati Lancet and Clinic.*

GOOD WHISKY AND BAD—THE BOURBON WHISKY OF KENTUCKY.

At no time has the question of stimulants in health and disease attracted so much attention as during the past few years. In England, especially, many master minds in the profession have expressed opinions upon the subject, and the matter has been viewed in almost every possible light. It is not our purpose here to enter into any argument as to whether stimulants are necessary to the well or sick, but to discuss a very important phase of the question which in America has not received that attention from the medical press which its merits deserve. We take it for granted that alcohol in some shape will always be administered to the sick; that its abuse and not its use may be abandoned. We are fully alive to the moral aspects of the question, and unreservedly advise teetotalism to those who by nature cannot drink in moderation, and perpetual care in prescribing a remedy so potent for good and evil. We consider it a very plain fact that well people have seldom a need for stimulants; that for such they are simply luxuries, and are innocent or harmful just as temperance is exercised in their indulgence. But we must think it equally clear, in spite of what Richardson and his splendid coadjutors have so attractively declared, that teetotalism in medicine will always have, and ought always to have, a limited following. The influence of alcohol in phthisis and in other wasting diseases, in blood-poisons, indeed alcohol in some stage or other of most of the ills which destroy human life or make it miserable, is too patent to the ninety-nine common sense practitioners for their belief to be shaken, however much they may be interested by the theories of the hundredth philosopher.

The sick are going to have alcohol in some of the shapes in which it is drunk, and a matter of the first importance is that the liquors administered to them be genuine and good. The possibility, or indeed the probability, of their not obtaining these has not generally been considered by doctors as it should be done. The physician orders good brandy, good whisky, good wine, etc., and leaves it to the patient's attendants to find them as they may. Some may possess the facility or the knowledge necessary to get genuine liquors, but the

vast majority, even among the intelligent, do not. The source for such supplies is ordinarily the neighboring drug-store, and their criterion of quality is the printed label, "For medicinal purposes." It never enters their minds that the exigencies of trade may make one impose even on the sick and helpless. But they do; and probably there is no inscription generally so false as those displayed upon the bottled liquors to which we have referred, unless it be upon the many tombstones, to which they are so closely akin.

One of the most general and useful forms in which alcohol is given to the sick is that of whisky. It has had its share of adulterations; indeed, on account of its immense demand, probably more than any other alcoholic drink. We propose to show how genuine and good whisky is made, and what are the poisonous compounds which pass under that name; also to call attention to the celebrated whisky of Kentucky, and to show how this may be obtained in its full purity.

The London Medical Examiner some time since, in the course of its food reports, called attention to the manufacture and adulterations of Irish whisky in a manner which proved of immense benefit to those who were to take alcohol in this form for its therapeutical benefits, and what the Examiner related in regard to Irish whisky has exactly the same force in relation to our native beverage. Genuine whisky is the product of the distillation of several grains—barley, rye, Indian corn, etc.—either singly or mixed in varied proportions. Originally it contains besides its alcoholic basis a mixture of *fusel oil*, which takes its character from the particular grain distilled. This at the outset is rank, and perhaps poisonous, but with advancing age it breaks into fragrant ethers, which give flavor and smell to the liquor in which it is contained. No process of art can force the changes in the fusel oil into a much more limited space of time than nature has demanded. In two years whisky is drinkable, but its better qualities are not developed under five years, and it continues to improve if kept in wood so that the air may come in contact with it, for a much longer period. And just as the proper whisky cannot be had without age, so no amount of time can change a distillation which was originally bad into liquor which is good. The grain from which it is made must be good grain, in which consists the honesty of the manufacturer; it must be treated in a certain manner, in which his skill is shown.

Spurious whisky is obtained in a number of different ways. The alcoholic basis may be had from the distillation of spoiled or inferior grain, rotten potatoes, and other decaying vegetable matter. Such a product, to be sure, is not likely to go on the market in its original state as a drinkable liquor. For this purpose it must undergo further processes. It may be rectified, as it is called, passed through charcoal, or redistilled, and its foreign ingredients left behind. It comes out as rectified or

cologne spirits, and is then pure. But it is not whisky, nor is it drinkable in this state. More than this, a score of years will not change it in this respect. It starts as cologne spirits, raw and fiery, and continues so as long as any remains. To change it into an imitation of whisky, it must be mixed with a certain proportion of the genuine article, or various compounds are added, some secret, some known to the trade at large, as burnt sugars, prune-juice, various essences, tobacco, creasote, strychnine, and what not.

These delectable substances not only possess the power of transmuting the cologne spirits into *whisky* of any age, but in skillful hands change it into three fourths of the French brandies, Holland gins, etc., which flood our markets, and with which the palates of our sick are tickled and their flagging strength sustained.

Chemistry is not always able to detect the genuine from the spurious whisky. Spirits may indeed be chemically pure, and yet not drinkable. So that, as a general thing, published analyses of this or that brand of whisky ought to carry with them little or no authority. As the Medical Examiner puts it, the test is only to be perfectly made by the taste and smell. "Genuine whisky diluted with twice or thrice its bulk of cold water gives off a delicate and subtle perfume, which is highly characteristic, and like genuine wine imparts both to smell and taste the impression of unity or oneness. Imitation whisky similarly treated gives off five or six coarse, nasty smells which struggle with each other for preëminence, until that of rectified spirits finally gains the day, and it tastes like what it is, a discordant mixture of ill-assorted flavors."

With such different histories as these, it can be easily imagined what must be the different effect on the economy after drinking genuine or spurious whiskey. The genuine, after it has reached a proper age, is not only soft in its taste, but is easily assimilated and takes rank as a wholesome food. The spurious, whatever age it may have reached, is to a variable extent poisonous. Even in their stimulant qualities they vary. With one it is possible, after liberal potations, that "the morning's reflections may not regret the evening's performances," and that breakfast may be reached with a clear head, and received into a steady stomach. From the other spring the hot skin and feverish pulse, the angry heart, the thumping brain, the gagging throat, and the intense regret over the unreturning past. If this be true with the libations of whisky taken by the robust for their pleasure, of what importance must our choice be in selecting a beverage from this species of alcoholic compounds for the sick.

It has been in the last two or three decades only that Kentucky whisky has been sought after to any great degree by the connoisseurs in the Northern or Eastern States, but the demand for it has steadily grown all over the Union during

the period named. In the South it, with similar brands, is nearly the only kind of whisky that is sold. Within the borders of Kentucky the excellence of the native beverage has been known almost ever since the State began, and there is no jury like a home jury in matters of this sort. When a distinguished member of our profession from this State was attending the American Medical Association at its meeting in San Francisco, he was asked in the Pacific Club what he would have to drink. He answered, "Some California Brandy." He was informed that it was not in the house, but that the steward would obtain it for him. "Never mind," said the wise doctor; "if the inhabitants don't drink it, I don't want it."

Kentucky whisky, or Bourbon whisky, as it is called from the name of the country which originally produced the best quality, is made from Indian corn, mixed in varying proportions with the smaller grains. While these are indigenous over almost the entire Union, peculiarity in soil, climate, and water (which is "limestone") give a character to the Kentucky distillations which can not be exactly imitated in any other of the States. Whiskies, indeed, made upon opposite banks of the Ohio by the same process, vary essentially in taste.

The whisky which originally gave reputation to Kentucky manufactures was generally made in small quantities by apparently very rude methods. Often the distillery was one of the sources of profit of the farm, and supplied perhaps the neighborhood only. The ruins of these still-houses are seen scattered over the State. There was no attempt at adulteration, as the price, even for the best when new, seldom exceeded twenty-five cents per gallon. The machinery was exceedingly simple. The mash was placed in a common pot still, to which the worm of ancient pattern was attached, and heated by wood fires. These are important items in the history of whisky manufacture; for while modern machinery has improved to such an extent the facility of distilling grain, new inventions have not succeeded in reaching the former excellence of the whisky produced. Indeed, one of the great sources of deterioration has arisen from patent stills, steam heating, etc., which, while they have quadrupled the quantity made in a certain time, do not produce the fusel oils in the proper proportions obtained by the old methods.

With the war came the tax upon distilleries, and the government officers to watch the manufacture and to collect the revenue. Then of course all the neighborhood stills stopped, except such only as were run by the light of the moon. Large capital was required to manufacture whisky, and the distilleries shrank in number and increased in size. Of course with these changes good whiskies steadily became scarcer. With a tax on them which exceeded ten times the amount the liquor originally cost, it was impossible to keep them off the market long enough for them to obtain the proper age. A

thousand barrels of whisky just from the still represented a hundred thousand dollars; and independent of increasing demand, with increasing population, and a preference for strong and fiery whiskies by the majority of drinkers, who drank for intoxicating effects, few dealers could afford to hold much of such stock, with accumulating interest, storage, and insurance, losing, as it did, in bulk every day from evaporation, for the years to roll around which were necessary to give it excellence. And so the difficulty continues up to this time in varying degree, and new whiskies only, as a rule, are on the market. *Ante-bellum* whisky is a curiosity, and whisky of ten or fifteen years of age, from all the reputable manufacturers, sells for a tremendous price. Of course, with the increaced price came the temptation for adulteration and compounding of liquors, and so genuine and good whiskies became more and more difficult to obtain. To such a pass indeed have matters come, that while fair whisky may be obtained almost anywhere in Kentucky, the very best is only to be got by those having special knowledge or its whereabouts. This condition of affairs, by the way, is not peculiar to this locality; for it is said that, in the brandy districts of France, the best of brandy is only to be had by the initiated; the majority of French brandy (even when not made in America) being only the inferior article which makes up the bulk of what is shipped to this country and sold for its name at such a high price.

It happens now that the difficulty of obtaining pure Bourbon whisky, properly aged, is about to be done away with in what we think a very practical manner.

The Newcomb-Buchanan Company distillery at Louisville is the largest distilling company of straight whiskies in the Union. Their rank in the United States is similar to that of the four great Dublin firms which gave the name and fame to Irish whisky. In 1873, in view of the fact that the genuine and old Bourbon whiskies were being so rapidly exhausted, they erected as a business venture an additional distillery, known as the Anderson Distillery Company, on a large scale, and put into it the best machinery their knowledge could dictate and their immense capital command. They constructed the original old-fashioned copper stills of former days, and in them they manufactured, from sour mash by open fires as of old, the Bourbon whisky of former days. This they have stored to obtain age, supplying the demand for new whisky from their other distilleries. The earlier crops of these whiskies are now sufficiently old to obtain a proper excellence, and the best judges in Kentucky have declared that they are fully up to the standard of the best Bourbon of equal years. Acting upon the advice of medical friends, the company have determined to offer these whiskies through the medical profession, and in such a way as to insure consumers that they have not been adulterated after leaving their hands. They will be bottled and sold in cases.

Each bottle will be protected and sealed with the trade-mark of the company, which mark will be a guarantee that the whisky contained in the package is old-fashioned, hand-made sour-mash, fire-distilled whisky of the Anderson Distillery Company, and not less than five years of age when corked.

Knowing the high character and standing of the Newcomb-Buchanan Company, we can testify to the good faith with which it will perform its promises. As the company has unlimited facilities for introducing their manufactures throughout the United States, there will soon be no community which can not command genuine and old Bourbon whisky, and this, too, at a moderate cost; for the company proposes to get very little more profit for the bottled whisky than for the same when sold in quantity. Retail dealers may sell it at the same cost, or at a very little advance upon that which they have demanded for inferior articles.

We trust good will spring from this move of the Newcomb-Buchanan Company, and that the day is not far off when their guaranteed brand (or that of other equally good Bourbon distillers) will take the place of much of the liquor which goes by the name of whisky in our pharmacies. Certainly it needs but an acquintance to make its way.—*Louisville Medical News*, Jan. 8.

NON-RESTRAINT IN THE TREATMENT OF THE INSANE.

By J. C. SHAW, M. D.,

Medical Superintendent of Kings County Lunatic Asylum, Flatbush, N. Y.

It is one year since we adopted non-restraint at the Kings County Asylum, and nine months since, by invitation, I read my paper on that subject before the National Conference of Charities, at Cleveland, Ohio. We have since that continued to carry out the system in the face of the many difficulties which surround us, and can to-day confidently say that we do not regret its adoption, and see no reason for returning to the use of restraint; in fact, we have seen much to commend its continuance We have endeavored to carry it out faithfully, observingly, and with firmness, so that we might judge of its applicability justly; not attributing, without careful examination, every little annoyance and trouble or an accident to its adoption, but taking ourselves to task, examining the thing carefully, and always finding out that the blame did not attach to the want of restraint apparatus, but admitting to ourselves candidly that it was due to a want of care on our part, or from a non-appreciation of the care necessary. As soon as this unforeseen defect appears, we remedy it and find no further trouble, but do not at once conclude that a return to the apparatus is demanded. This, and this alone, is the spirit in which the system of non-restraint should be approached. I think my-

self justified in saying that it is not the system which is at fault, but those who adopt it and fail.

The adoption of it is demanded from a humanitarian point of view; patients beg to have the apparatus taken off of them. Those who wear the camisole night and day are placed in a most uncomfortable and constrained position. It is hard to conceive how a patient can sleep in one of these things; the struggle which the patient has with the attendants to get the apparatus on, inflicts injuries, bruises and humiliation on the patient. If he is powerful, and the attendants have a hard struggle with him, they will often use undue force; and if not having a correct appreciation of their calling—which they seldom have—they may, and do, try to bring the patient to a quiet state by striking him, kneeling on him, etc., and very often the restraint is applied without just and sufficient reason. The result is, that hereafter the attendant and patient are in antagonism, which is detrimental to the comfort and health of the patient. All this is infinitely worse than any trifling accident which might occur from the want of restraint, but this is entirely lost sight of by those who argue against non-restraint. It has been said that patients would rather be in restraint than be handled roughly by the attendants; that may be true, if such rough handling were required, but it is not. If you have a patient who is to be so handled by the attendant, place him under the care of another, if you have any good attendants. You will surely find one that the patient gets along with; adapt the attendant to the patient, then you will find such argument useless; if patient and attendant disagree, and which always occurs when the attendant has to use restraint apparatus on the patient, you will always have trouble with them both as long as you keep them together, unless your attendant, by brutal treatment and beating, compels his charge, thereby, to keep quiet and submissive.

There is a class of patients which, it is believed, ought to be in restraint: those who have hallucinations and delusions of a terrifying character. Restraint simply adds to the terror of these patients; these are the patients which are often put in "cribs." Patients admitted to asylums are often frightened by the strange sights, sounds, and unfamiliar faces which they see and hear. If they believe that they are to be destroyed, killed, or tortured, these surroundings and the restraint strengthen or add to their terror.

Where restraint apparatus is used freely, it is simply encouraging attendants to neglect the care of the patients. Attendants, ordinarily, like nothing better than to have restraint used, and they will advocate its use to the physician. When you find an attendant asking to be allowed to use restraint, it is evidence that the attendant is either desirous to save himself or herself trouble, or that he does not know how to care for the patient.

No one knows better than I do the care and anxieties connected with the position of superintendent of a large asylum. In some asylums the insufficiency in the number of attendants, and, above all, the want of occupation for the patients, are some of the difficulties in the adoption of non-restraint, but in spite of these difficulties much can be done.

Those who are opposed to non-restraint are in the habit of parading out a long list of casualties which have occurred in asylums without restraint, but ignore the accidents which occur in asylums with restraint. To judge of the benefit of the system by such a test is unjust, and is an argument which would only be brought forward by men determined to defend the practice at all hazards.

Dr. Allan McLane Hamilton, in his testimony before the Senate Committee, was a defender of restraint, and he made the statement which was partly incorrect, that a patient committed suicide at the Kings county Asylum because she was not put in a "crib."

Dr. Hamilton is a blind defender of the "crib" and other restraint apparatus, and advocates its use at all times and on all occasions. The patient who committed suicide at the Kings County Asylum was a quiet melancholic. Now to argue that this patient ought to have been put in a "crib" is ridiculous and unjustifiable, and in the use of this argument Dr. Hamilton has placed himself on record as a defender and advocate of the neglect of the personal care which patients in such a condition ought to receive. The adoption of restraint in such cases means simply neglect of the patient, and he could not have used a better argument in support of the position we take.

The use of restraint apparatus means the neglect of the patients by the attendants and medical officers; such patients ought to be under the eye of attendants night and day; that is the remedy for suicides, and not the "crib."

It is strange that the restraint system is defended so energetically by a comparatively few superintendents, the others acquiescing.

Dr. Andrews, formerly at Utica, a bright, energetic gentleman, on a visit made by us to the Utica Asylum, told us that they used very little restraint, and we really saw none except the "crib." We saw violent patients having a good deal of liberty, as they ought to have.

Dr. Carlos McDonald, who testified before the Senate Committee, admitted that he had tried non-restraint and found no harm from its use, but appears to have abandoned it without good reason. After such an admission, he at once proceeds to argue in favor of restraint. It is evident from what we have seen and heard from Dr. McDonald, that his defence of restraint is not so from personal conviction.

Why this inconsistency? Why are these superintendents so

pertinacious in defending a system which is so widely adopted in America to the detriment of patients, when they themselves admit that they use very little of it or pretend they do?

What motive can they have in making themselves the champions of asylums that use it unjustifiably?

This is, to say the least, a strong proceeding.

The question is frequently asked: What do you do with patients who break glass windows, etc.?

This leads me to say a few words in regard to the method we adopted at the start, and that which has been our guide up to this time.

Whoever has been much in an asylum knows that a variety of small things are continually coming up, which have never before appeared in the same way. Many of these have to be left to the good judgment and discretion of the medical officers, as patients have often to be treated quite differently, and this calls for a special decision. An outline of the plan we adopt and are guided by can, therefore, only be given.

At the beginning we sought to find out why such patients were in restraint. We often found what was given as a reason was, in our judgment, quite inadequate, the nurses stating that they are bad patients and cannot be got along with without restraint. So we change them to other halls with other nurses, and then remove the restaint, and we find no trouble. Have no restraint apparatus; then not having it, you are compelled to find some other way to get the patient to behave properly. Having the restraint apparatus, you and your attendants are very apt to resort to it and think it necessary, and could not get along without it; but if you have none, you will soon find that it is unnecessary. I cannot do better than give an illustration of how we manage.

A young man is admitted; he goes to a reception hall; is quite excited; as soon as he finds he is in an asylum, he is determned to get out; he becomes more excited; he suddenly rushes against the door with all his might, striking the door with his shoulder; he breaks the door open, tears the lock out, and splinters the door in several places; he finds himself in another hall, into which the door opens; he sees and is told that he cannot get out; he soon becomes calmer, and does not try again to get out. Ordinarily that patient would have been put in a camisole at once. A grand struggle would have ensued, and perhaps damage done to some one. The carpenter mends the door. We seldom have anything worse to deal with in the male department. If a patient breaks a door, a glass, or more, we repair the damage and leave the patient alone. When patients do these things they usually do so at once, unexpectedly, and that is the end of it. They do not do it again, especially if left alone; it is no use putting them in restraint after it is done.

A patient will sometimes strike another; this is generally because some difficuty arises between them; he strikes the patient, and that is the end of it. Restraint is no prevention of this, unless you keep them all in restraint; it is better for the attendant to try to prevent this. It will sometimes occur in spite of ordinary care, and the patients will themselves explain the difficulty to you. I have just had an affair of this kind occur, which illustrates what we sometimes do. A man, who for months past had been peaceable (he has always been rather pugnacious), has been in a hall where all the patients work out-of-doors winter and summer; it is found that he begins to become quarrelsome, wants to fight with the other patients; but there are three men that he appears particularly anxious to have a pugilistic encounter with. This disposition he presents for many days, and on one day struck one of them; he is surrounded with quiet men. It is evident that at present this is not the place for him. If I leave him here, there will soon be a grand row. I at once had him removed to another hall. This is the remedy.

Those patients who tear up clothing it is most difficult to deal with, as far as the prevention of this propensity is concerned. In the majority of cases, however, this habit lasts only a certain length of time, and then is given up. It is seen mostly in paretics. So far I have allowed them to tear up. In a few instances, we have tried to keep them occupied in doing something else, if their physical state permitted it. I have had persons express horror and surprise at my allowing patient to tear up things, but they did not choose or stop to think that it is infinitely worse to have the patient suffering in restraint. We have tried, with some success, quilting blankets with burlaps. After all, what we have lost by tearing up is comparatively small.

The above-cited class of cases are the ones you oftenest see in restraint in asylums, and which swell the percentage of patients in restraint, and not those who come in a violent maniacal state, complicated, perhaps, with epilepsy. These are cases which, in my opinion, require medication rather than the camisole. These are, however, not a class of cases which help to swell the population of an asylum. Seclusion may be necessary with such a case. We have had very seldom to resort to seclusion in the male department.

We have had a little different thing to deal with in the female wards. Some of our most noisy and quarrelsome patients never require any interference. A few cases of periodic mania give us some trouble. When in the maniacal state they will fight with each other, unless watched constantly, and even then they will sometimes begin a fight and require to be separated by the nurses. It occasionally happens that, under such circumstances, I am obliged to order a female patient into seclusion for a couple of hours at a time. I have never had to

carry it out for longer than six hours at a time. A great deal is in the adaptation of the nurses to the kind of patients you have to deal with.

There may be two excellent nurses, one of them thoroughly unfit to take care of a violent patient, and the other one admirably adapted for it. It is impossible to get a corps of nurses all equally good.

The style of buildings we have for asylums is not the best for restraint. The halls are too large and too long; too many patients have to be kept together (this often gives trouble); there should be large and small wards, some wards so small as to hold only six to twelve patients. The crowding of a lot of patients together is detrimental to them, and makes it more difficult to care for them properly. Thirty-five to forty patients in one ward are a great deal too many. It may be advantageous when trying to conduct an asylum in the cheapest manner possible, if that is all that is aimed at in the care of the insane.

The changes and advantages apparent since we adopted non-restraint, may be summed up as follows: Less discontent, fewer encounters between the attendants and patients; we hear less often of patients breaking glass.

We have fewer fights between the patients themselves; they do not so often importune to go out, and I think I am safe in saying that we really have less destruction of clothing and furniture. We do not meet with the bruises inflicted by the apparatus and the application of it, and the unfortunate patient importuning to have it taken off, and we see no indication for its use at this day.—*Archives of Med.*, Feb. 6, 1881.

THE UTERUS—SOME OF ITS DISEASES, AND THEIR TREATMENT.

By O. E. Herrick, M. D., Grand Rapids, Michigan:

There are no diseases so frequently met with by the physician who treats diseases of women, as uterine displacements and their sequelæ, nor are there any so obstinate and barren of results after being faithfully and scientifically treated.

To test the truth of the above assertion, one has only to read the many and totally different methods of treatment in our text-books and medical journals on the one hand, and on the other to look at the many, and, in some instances, strange devices invented to hold that unruly organ of the female anatomy in position. Some of this uterine machinery is constructed, it would seem, without the slightest idea of either the natural position of the uterus, or the shape of the vagina. Many pessaries are built upon the false notion that the uterus is held *in situ* by its ligaments, and their only action is to destroy the most useful agent in retaining that organ in position, *i. e.*, the vagina. The class last mentioned can be grouped

together and named in one sentence—*anything that distends and weakens the muscular walls of the vagina.*

Until lately it has been considered quite a knack in some instances to reduce a displaced uterus, especially if that displacement was a *version* of any kind; and much has been written upon the different methods and instruments for that purpose. Now, while others may have practiced putting the patient in the knee-chest position and allowing the uterus to right itself by gravitation, aided by pressure in the vagina, to Dr. Campbell, of Georgia, belongs the credit of discovery, for he was the first, I believe, to proclaim it as such to the profession, and I hail it as a discovery and a valuable one; for if practiced properly it will, in every instance, reduce any and all forms of displacement of the uterus, without the aid of either speculum, sound, or probe. After it is once replaced, it requires very little force to retain it there, and it is wholly unnecessary to load down the vagina with heavy pessaries of any kind, or to use uterine supporters with spring enough in them to run a saw-mill? What *is* required is something with just enough force to *help* retain the uterus in its natural position. But we should rely in part upon the natural supports, and by simply *helping* them they will become strong enough themselves, with proper treatment and *partial use.* The muscles of the vagina are like muscles anywhere else. If they are totally unused, they will become, after a time, paralyzed and no longer able to contract; hence, in using pessaries, or uterine supports of any kind, one should choose those that distend the vaginal walls the least, and at the same time that have strength enough, and none too much to prevent the organ from becoming displaced after being placed in proper position. In almost all forms of displacement, the uterus is more or less enlarged and distended with blood, and by passing a sound one will almost always find the canal of unusual depth; and when this condition is overcome, the normal supports will, as a rule, hold it in its proper place without any artificial aid, unless there is a torn cervix, ruptured perineum, or perineal body. A few years back, and this would have called for caustics and cold vaginal douches. Now we think we can do better with milder means, and instead use warm-water injections, a gallon at a sitting, three or four times a day, with mild ointments, composed of vaseline as a base, to which we add almost any medicine that suits our fancy. A favorite prescription with me, to apply locally in such cases, is vaseline ℥ij, hyd. chloral ℥ij, tinct. iodine ℥j. Apply to the os and neck upon cotton. I have found that this preparation quickly relieves all tenderness and pain, and I believe helps to reduce the abnormal size of the organ.

Only a few years ago, and one scarcely ever heard of a case of cellulitis, and our older text-books do not mention such a thing; and yet to-day we all well know that cellulitis is one of

the most frequent diseases of women, and often one of the results of displacement of the uterus. I have more than once seen a sharp attack follow upon the reduction of an old displacement, where the abnormal condition had been continued so long that it had almost become the normal condition, and when this was interrupted inflammation supervened. Cellulitis also follows often upon a recent displacement, and it is, many times, the first real intimation the patient has that something is wrong. This disease is sometimes most difficult to control, and one that will cause people to change their medical attendant as soon as any I know of. The proper method of treatment is, I believe, pretty generally followed, for disease and treatment were discovered together only a short time ago. It consists of hot vaginal douches, fomentations over the abdomen, febrituges for the fever, bowels to be kept open, quinine, etc.

Lately, in addition to the above, I have been in the habit of filling the vagina with linseed poultice. My readers may consider this a queer thing to do, but I can assure them that it works very nicely, and is most acceptable to the patient, as it relieves the pain and heat to the parts. It is accomplished in the following manner: I introduce a speculum, and with a small spoon fill the vagina as full as possible, withdrawing the speculum as the vagina is filled. I then apply a bandage to keep it from coming out; about three times a day I change it, and at that time give a vaginal injection of hot water. Since adopting this method, I find that I can shut down these attacks much sooner than I formerly did, and now I had much rather do without the fomentations to the abdomen than the vaginal poultice. These cases very rarely run with me now over three or four days at the outside.

Irritation of the bladder is another trouble often caused by uterine displacements, although, of course, it may and often does occur independent of it. When it is caused by it, it is from pressure either of the fundus of the uterus as an anteversion, or by pressure of the os upon the neck of the bladder as in retroversion. Many patients will complain of nothing else except that they have to pass water too frequently, and upon making a vaginal examination one finds a uterine displacement, with either the os or the fundus pressing upon the bladder.

Dysmenorrhœa is another of the most frequent diseases caused by displacement of the uterus, and is, as a rule, remedied by its reduction; sometimes, however, it has become, from long continued displacement, an established habit, and when the uterus is placed in position the pain still keeps up, although in a less degree, at each menstrual epoch. When this is the case, I have usually found it amenable to the following treatment: daily injections of hot water locally, and the use of viburnum prunifolium, with small doses of ergot internally, for ten days before the expected menses. After following up

this method for three or four months, it will usually entirely disappear. Follicular endo-metritis, on the contrary, does not so readily yield and will sometimes continue for many months to resist all forms of internal medication. This troublesome disease is another of the sequelæ of uterine displacements, and is very often present in the form of menorrhagia; in fact, these little swelled and inflamed follicles are what, in many instances, keeps up the menorrhagic flow. It often happens that women do not have menorrhagia until after the uterus has been replaced in its proper position, and then they flow very profusely, often "*coming around*" every ten days or two weeks, and many times there is almost an uninterrupted flow—almost no interval between its ceasing and commencing. This condition usually follows upon either version or flexion, and is no doubt caused by the blood vessels being bent at an acute angle, thus producing stasis of blood, congesting the membrane lining the uterus and producing the enlarged follicles mentioned above. When the uterus is straightened up, the blood can again circulate without interruption, and then when the flow commences these enlarged vessels and follicles hold more blood than they should and continue long beyond their time, while the lax condition of the membrane and want of tone to the coats of the blood vessels prevent them from contracting sufficiently to stop the bleeding.

Leucorrhœa is often present, and is produced from the same cause. If these conditions are allowed to exist long enough, these inflamed follicles develop into those little fleshy growths so often seen inside the uterus, in cases of menorrhagia, and called by some mucous fungoids, which they certainly resemble. The method, followed by many gynæcologists, is to scrape them off with a curette every few days, and then apply tincture of iodine to the membrane. This is no doubt good treatment, and will succeed in the majority of cases in arresting the hemorrhage and formation of the growths. It is also rather harsh treatment, and necessitates dilatation of the uterine neck in a degree; and in one case, at least, in which I practiced it, it set up quite a violent inflammation. For the last few months I have been pursuing a different and milder method, which in my hands has, thus far, proved as effectual as the one described above. It is as follows: I mix up an ointment composed of vaseline ℥ij, tannic acid ℥ss, tinc. iodine ℥j, hyd. chloral ℥ij. I then fill a hollow glass tube with the ointment, and by the aid of a small wire, with a piece of cork attached to the end small enough to work easily through the glass tube, push the ointment into the cavity of the uterus. I repeat this procedure every day as long as necessary, and find that it does just as well, in many cases, as curetting, while it is entirely devoid of the dangers which attend that procedure. In addition to introducing ointments within the uterus, I place pledgets of

cotton, with the same ointment upon them, around and against the os and the uterine neck, while I give internally a prescription of ergot ℥j, fluid ext. vib. prunifolium ℥ij, fluid ext. erechthites ℥j, of which I give the patient a teaspoonful three times a day, and during menstruation a teaspoonful once in three hours.

While upon this subject, I cannot forbear giving an illustration of the dangers attending the use of the curette, which every novice holds in hand ready to scrape out each uterus as it presents itself for treatment. It is *one* of the procedures which is liable to very great abuse, as it is a simple and easy operation. While it has for a few years past been almost universally recommended by all writers and teachers on gynæcology as *the* thing for uterine hemorrhage in fact, it should only be attempted by one who is experienced in treating and operating upon the uterus and who is capable of the most skilled and cautious manipulations. In making the above statement, I not only refer to the sharp curette, but to the dull wire curette. It also, in unskilled hands, is liable to produce most alarming results. A case recently came under my notice, where a physician used a dull curette upon a case of menorrhagia but once, when she was attacked the next day with severe metritis and cellulitis, which in a few days developed in peritonitis, and at the time I was called in consultation her chances looked extremely doubtful; however, she ultimately recovered after many weeks of intense suffering. Now, the physician in the case was an experienced and reliable man, and he said that he did not unduly use the curette, but had used it with greater severity in a great many cases. Another case occurred in my own practice. The patient was a married woman, aged 26 years, primipara, and was sufferring from menorrhagia.

I found upon examination those fungoid growths and enlarged glands upon the uterine mucous membrane, but otherwise the patient seemed to be in good health. I used the dull curette, and then instructed her to keep her bed for 24 hours, which she did. But I was called at the end of 48 hours, and found her suffering from endometritis; she had had a pronounced chill, and was feverish; temperature 102° and intense pain in the pelvic region. I treated the case as mentioned above, *i. e*, hot water injections, vaginal poultice, abdominal fomentations, etc., and she recovered in three or four days. I have seen quite a number of other cases of the kind, caused from curetting the uterus, all of which has convinced me that the operation should be done only with extreme caution and by one skilled in its use.—*Obstetric Gazette* (Cincinnati) Jan.

SHALL WE CHANGE THE CODE OF ETHICS?

At the next meeting of the Medical Society of the State of New York, to be held the coming week, the recommendation of the Medical Society of the County of New York for a revision of the Code of Ethics will be presented. That the time has come for bringing to an issue the question as to the advisability of such a measure, is admitted, not only by the members of the county society in question, but by many members of the medical profession throughout the country.

The experience of the county society, during the past few years especially, has shown that many sections of the code are susceptible to such liberal construction as to be practically valueless as guides for conduct or as means of discipline. At present it seems to be impossible to draw a line between such as wilfully disobey the law and such as only innocently err. A code which is subject to such varied construction is oppressive only to such as conscientiously strive to follow its letter and spirit, while to others who are otherwise disposed, it is a cloak for unmanly conduct and hypocritical pretension.

The various committees on ethics of the New York County Society have proved time and again that it is almost impossible, under existing circumstances, to secure a conviction of some of the most flagrant offenders against even the letter of the code, simply because such offenders presume upon what they term their high positions in the profession. From what we can learn, this experience has been repeated by committees on ethics, not only of the minor societies, but of many of the larger ones, not omitting the very fountain-head of discipline, the American Medical Association itself. Hence, a belief has gained currency among the profession that the code, as at present constituted, is nothing more than a convenience for the strong, and little else than a means of discipline for the weak.

Any doubts regarding the truth of this statement can be set at rest by a perusal of the able report of the committee of the county society already referred to. The committee endeavored to call the attention of members to violations of the code regarding advertising. Almost without exception, the guilty parties began to make excuse. One prominent offender stated that the profession was safe in his hands, and that he should continue to do as he pleased. In the same connection is a letter from a medical gentleman withdrawing his membership from the society, on the ground that the code is not equal in its application to the larger and smaller men. He very properly does not believe that a man, merely because he may be a professor, has a right to advertise himself any more than a more obscure individual. The committee appear to be unable to reconcile the apparently opposite situations, and wisely ask the society for help in the matter.

We cannot be expected at this time to go into exhaustive

detail as to other reasons for revision of our ethical laws. By so doing we would be repeating a very old story. We can only urge the necessity of revision on general considerations. Laws which cannot be respected and enforced are useless. The progress of civilization has made it necessary that laws be modified to suit the times. Many of the conditions that existed during the period when the laws were framed are so changed as to render many of the provisions virtually obsolete, and their enforcement ridiculous. This is due to the fact that the relations of the profession to the public have changed very much during the last few years. The people are better educated than formerly, and better appreciate their wants. The tendency of the age is toward liberality of thought and feeling. The medical profession cannot afford to stand aloof from these influences, and must not trammel itself with inconsistent rules of action, or absurd lines of conduct. Its culture and influence are sufficient to enable it to be thoroughly liberal on all matters relating to the health and welfare of the community. This being the case, the time appears to have arrived when the State Society can take intelligent action in revising its code. Its action in the premises will be viewed with great interest over the country. That body should feel the responsibility thrust upon it, and should be ready and willing to act promptly and efficiently. The matter should be referred to a committee composed of men of large experience, commanding influence, and unquestioned integrity. To such, the task of revision may become a simple affair. Their principal work would consist in pruning. The nearer the code can be made to accord with the golden rule the more perfect will it become. From this standpoint there is room for improvement in all directions, and a great deal can be said in a few words.—*N. Y. Medical Record*, Jan. 29.

Editorial Department.

TO OUR READERS—A NEW PROPOSITION.

The Managers of this Journal announce a new departure at the end of the present number, which closes the volume. We have long recognized the desirability of conducting it on strict business principles, but have so far felt unable to break off from the traditions and habits of the past. The subscription price of the JOURNAL, once more and never less than

five dollars a year, was expected to cover the risks of an indefinite credit. Changes from a bi-monthly to a monthly, and from 80 pages in a number to 100, do not seem to answer the wants of physicians in the Southwest. Evidently they require a cheaper journal, like their brethren in other parts of the country, and we shall attempt to answer the demand. We therefore propose to reduce the subscription price to three dollars a year, from July, 1881; but, as this moderate rate allows no margin for risks, we are under the necessity of insisting strictly on payment in advance. This condition has been found indispensable to success in all serial publications, and is now so generally adopted that we are sure our subscribers recognize it as as the only proper plan—the only one which will justify so great a reduction in price.

It being our determination to present every reasonable inducement to increase the circulation of our Journal, we offer the following club rate: any one sending an order with ten dollars can secure four copies for one year, to be directed to as many different addresses, free of postage; and larger numbers at the same rate.

Another change proposed is to condense the selected matter, giving a brief synopsis of the articles, instead of the full text. This plan will involve a large amount of extra labor, but will add materially to the value of the JOURNAL, by enlarging the scope of selected matter. At the same time it will enable us to reduce our pages from 100 to 80 in each number, without curtailing the real amount and value of the articles presented. Indeed we are sure that most readers will prefer to have the essential meaning of writers conveyed in the briefest language.

Those who have already remitted for subscriptions in advance of July 1st, will be credited according to the new rate; and those who desire to continue their patronage, will please signify their intention by the proper remittance, before the July number goes to press (June 15th), so that the edition may not run short.

With this change we have reason to expect a great enlargement of our circulation, which should not merely increase its in-

fluence and usefulness in proportion; but we hope that our subscribers will also become contributors, so that we shall have a larger amount of material at command for choice in the original department. With these remarks, we commend the proposition to the favorable consideration of our readers.

HEAT AS A FEBRIFUGE.

A second letter from Dr. J. N. Lea, in this issue, seems to invite further discussion on the above subject, and we shall here notice some of his points.

We are not aware that the physicians of this day are wont to deplore their helplessness in the presence of such diseases as typhoid, typhus and yellow fevers, nor that they have lost ground in success by relying less on drugs in treatment. As to the action of the cinchona alkaloids, they are regarded as lowering the body temperature, in large doses, rather than increasing it, and are given during the hot stages of fevers accordingly.

The question, whether danger in a case of high body temperature be due to the morbid action causing the same or to the temperature itself, is not of consequence, inasmuch as experiments with animals have shown that subjecting them to prolonged confinement in a hot chamber is dangerous in proportion to elevation of temperature and duration of the confinement.

In the treatment of superficial erysipelas, we have found the application of cool lead lotions so satisfactory, as to leave nothing to be desired in the shape of local treatment. Tonics and stimulants are also indicated, but not to elevate the body temperature.

The cooling treatment of a person laboring with fever is quite different in effect from the same applied to a person resting after severe physical effort. While the individual is undergoing exertion his case is parallel with one of fever, in the continued generation of more heat than the system requires; and the abstraction of heat in both instances, if not excessive, is alike agreeable and harmless,

The danger to a person resting is in the abstraction of heat after its over-production has ceased, in which case there is a sensation of chilliness. In case of cooling down a person with fever, the sensation of chilliness is equally a warning to pause in the process; and indeed it is better to stop short of such warning. But it is plain that the danger of harm from refrigeration is far less while the production of animal heat continues in excess, than when it has returned to the normal standard.

We do not object to Dr. Lea's view, that febrile symptoms "are but the struggles of an embarrassed organism, to free itself from some morbid agent impeding its healthful functional action"; but we hold that the struggles may be too violent for the safety of the subject. Granted, that nature is making a laborious effort to rid the system of some disease-poison. She may labor too hard, and by the production of more heat than the surface of the body can conduct away, the resulting condition will be like that found in heat-stroke from too violent exertion in a hot atmosphere. The part of prudence is to prevent the over-production of heat, if this be practicable; or, if not, to abstract the excess by cooling applications. Nature has a certain amount of work to do, in ridding the system of the morbific influence. She may be too rapid or too slow in her efforts. The part of the judicious physician is to let her alone, as long as she works safely and well, but to promote or retard her action, according to the indications furnished by the symptoms.

As to the classification of symptoms into the two divisions, "recuperative" and "destructive," we do not see how this can be made expedient. Any symptom much in excess of the normal standard must be properly regarded as morbid, and the effort of the physician should be directed to the restoration of an equilibrium in the various functions, which is another term for health. The idea of *antithesis* seems to be predominant in the Doctor's communication. Thus we find health and disease, recuperative and destructive symptoms, suggesting opposite sides of polarity; even homœopathy and "allopathy," whatever the latter may mean in the dialect of the followers of Hahnemann. Let medical sectaries, of what-

ever school, call themselves homœopaths, eclectics, hydropaths, or what not, the name physician, without qualification, is not too broad for the catholicity of our doctrines and practice, nor will it fail to distinguish us from those who are possessed by an exclusive dogma.

SOLUBLE COMPRESSED PELLETS FOR HYPODERMIC USE.

We have received from John Wyeth & Brother a case containing specimens of these pellets in small vials, variously composed of morphine, and morphine combined with atropine, rendered more soluble by combination with sodium sulphate. Each pellet is intended for a dose, to be dissolved in a suitable quantity of water. A convenient method is to break a pellet into fragments in a spoon; then take up a few minims of water with the hypodermic syringe and throw it into the spoon to dissolve the dose, when it is ready for use. The advantage of this plan is the avoidance of the penicilium, which is sure to form, sooner or later, in the solutions kept for use. A few drops of chloroform in the solution will, however, greatly retard the appearance of this vegetation; but, unless one has quite frequent occasion to use the hypodermic syringe, he will probably find the pellets an improvement on the ready-made solution.

Reviews and Book Notices.

Transactions of the Thirtieth Annual Meeting of the Illinois State Medical Society, held at Belleville, May 18–20, 1880. 8 vo. Pp. 228.

The address of the annual orator, Hon. William H. Snyder, is a vague and rambling discourse, seemingly intended to be complimentary to medical men, nowhere original, and to the most simple listener scarcely instructive.

The address of the President, Dr. E. Ingalls, has Hygiene

for its topic, particularly that of cities. The paper is so sensibly written, that its extreme brevity is to be regretted.

In the report on Practical Medicine, Dr. W. S. Caldwell, commends Prof. Austin Flint for enunciating the specificity of pneumonia, and praises the cold water treatment for this disease, when attended with great elevation of temperature. He does not assent to the identity of diphtheria and membranous croup, as taught by Drs. Morrell Mackenzie and A. Jacobi, in their late monographs.

Dr. B. F. Crummer also professes his belief that pneumonia is a systemic disease, and not a local inflammation. In his experience it has usually been asthenic in character, requiring alcohol and ammonia freely.

In a report on Surgery, Dr. Wm. Hill regards any surgeon as culpable who neglects the antiseptic plan. As close attention to cleanliness has attained the same favorable results, we may conclude that the antiseptic treatment and cleanliness are equivalent, and that the surgeon may choose the plan found most convenient.

Dr. G. W. Nesbitt, in the report on Obstetrics, sets forth in a strong light the deficiencies of young graduates in this branch of medicine, owing to the want of practical training. He urges the society to use its influence for establishing training schools of midwifery in connection with every medical college.

Dr. J. W. Fink relates the case of a woman far advanced in pregnancy, who was bitten by a rattlesnake. Twenty-four hours after she was delivered of a dead child, which exhibited the delineation of the reptile from the foot spirally upward to the body. Another case of mother's mark is traced to the discovery by the mother, during pregnancy, of a dog with its partially decomposed head projecting from the ground, where it had been ineffectually buried. In the January number of the *Am. Jour. American Sciences* is related the case of a woman fatally burned in the last stage of pregnancy. Premature labor supervened, and a dead child was born, presenting almost identically the same appearance as that of the mother.

Dr. E. L. Herriott, in a report on Anæsthetics in Labor, favors their use in most cases, whether natural or preternatural.

Dr. H. Z. Gill, in a pretty thorough paper on the Identity or Non-identity of Membranous Croup and Diphtheria, concludes that there is no distinction, microscopical, chemical or clinical, in the exudations, such that some should be classed as diphtheritic and others as non-diphtheritic. In membranous laryngitis he recognizes, in most cases, the action of some cause akin to that producing the zymotic diseases; still he is not satisfied whether this cause is identical with that of diphtheria.

This volume is handsomely printed on fine paper and bound neatly in muslin. In comparison with similar reports, its outward appearance is superior to that of all others, and its contents occupy a very respectable rank for scientific value.

S. S. H.

Transactions of the Mississippi State Medical Association, at the Thirteenth Annual Sesion, held at Vicksburg, April 7-9, 1880. Pp. 177.

The address of the President, Dr. E. P. Sale, has for its subject, The Duties We Owe Our Women. He pleads for a better hygiene for growing girls, and cautions against the excessive use of the sewing-machine in the period of child-bearing. The practice of criminal abortion he properly regards as not only an offense against morality, but disastrous to health.

The Annual Orator, Dr. B. F. Ward, discoursed upon Medicine in the Cotton States. He contrasts the material prosperity of Northern physicians with the poverty and laborious lives of their Southern brethren. He points to the imperfectly recognized services of such men as Warren Stone and Crawford Long. He instances the emigration of Dickson, Bozeman, J. C. Nott and Sims to the North, where they have become famous, having failed of due appreciation at home. He protests against the excessive and indiscriminate exercise of medical charity, as an intolerable burden on the profession and as leading to idleness and pauperism on the part of recipients. He advocates the organization of a Southern inter-state organ-

ization, to be known as the Medical Association of the Cotton States.

Dr. C. A. Rice, on Treatment of Wounds, advocates their complete closure, to the exclusion of any contrivance for drainage. He would sew up gun-shot wounds, having first cut away by elliptical incisions the bruised and dead skin around the orifice. These doctrines are not in accordance with accepted surgical authorities, but experience must decide.

Dr. Wirt Johnston relates a case of amputation of both legs in the same subject, thymol being used as an antiseptic dressing in one and salicylic acid in the other. The salycilic acid dressing was followed by union by first intention, while the other resulted in unhealthy suppuration and sloughing, and salicylic acid was then resorted to.

Dr. John B Pease gives an account of the out-break of yellow fever at Concordia, Bolivar county, in 1879. Its origin is traced unmistakably to Memphis, and the infection appears to have been brought in a valise of clothing from the infected part of Memphis. The owner of the clothing, however, did not have the fever himself in 1879.

This volume, like some of those previously noticed, is largely made up of brief clinical reports, which would have seen light in medical journals, if there were any in the State. There are also reports on progress surgery and obstetrics, some short papers on new remedies, an essay and a clinical report on malarial hæmaturia. The Association is evidently a healthy and working body of men. Unfortunately the pages are marred by numerous typographical errors, which should have been eliminated by more careful proof-reading.

S. S. H.

Transactions of the Twenty-seventh Annual Meeting of the Medical Society of the State of North Carolina, held at Wilmington, May 11th, 1880. Pp. 144.

As in the volume previously noticed, we find here no formal address or oration, but the papers are fewer in number and much longer.

In a report on the Progress of Ophthalmology and Otology, Dr. R. M. Lewis inclines to the opinion that vision is a photochemical process, and not a physical one. He admits, however, that his theory is not demonstrated, and recognizes as a great objection to it the absence of the "retinal purple" in many birds.

Dr. Eugene Grisson contributes thirty pages on the subject of Medical Science in Conflict with Materialism. While accepting the established facts and discoveries of science, he rejects the theory of evolution, and contends vigorously for the old theology of a personal deity and separate creations of inorganic substances and the various forms of life.

Dr. E. A. Anderson has decided views of his own on the subject of quarantine. Yellow fever cannot break out in any locality, unless peculiar local conditions happen to exist. As nobody knows what these conditions are, or when they exist (until it is too late to mend the matter), the doctrine has all the mysterious grandeur of the calvinistic doctrine of election. The failures of antiquated quarantine administrations to exclude yellow fever are made conspicuous by high testimony. He exposes unsparingly the imperfections of the present system at Wilmington, which is certainly behind the age and a disgrace to the authorities, but cannot be improved without a liberal appropriation of funds. He recommends a uniform system of maritime quarantine for all the Southern States, under the direction of a common central authority, supplemented by local sanitation.

In a report on the Progress of Gynæcology, Dr. Wm. R. Wilson quotes from a paper written by Prof. H. F. Campbell, of Georgia, on Rectal Alimentation in the Nausea of Pregnancy. Prof. C. observed intestinal movements after the administration of every nutritious enema, and became satisfied that their direction was upward, carrying the food from the rectum to the upper intestinal tract, where digestion and absorption are actively carried on. He styles this action *retrostaltic*, and compares it to vomiting and the function of rumination. This theory is reasonable and far more satisfactory than the commonly accepted one of rectal absorption.

We are sorry to find the general excellence of the papers disfigured by typographical errors, which should have been eliminated in the proof-reading. S. S. H.

Transactions of the Minnesota State Medical Society. 1880. Pp. 190.

The speech-making of this meeting consisted of an address of welcome and a few remarks from the President. A large number of articles follow, most of them brief, many being clinical reports of cases. In the absence of a local medical journal, the annual volume of the State Medical Society serves as the organ of the medical profession. None of the articles possesses such originality or novelty as to command the interest of our readers. S. S. H.

NEW JOURNALS.—We have received the following:

(1.) *Mississippi Valley Medical Monthly.* Drs. J. J. Jones and Julius Wise, Editors and Proprietors, Memphis, Tenn.

Vol. I, No. 3, is before us, containing 48 pages, 8vo. Subscription price, $1 00 per year. Twenty pages are devoted to original matter, including editorials and book notices.

This new candidate for medical patronage has a sufficient geographical field, and with its present standard of contents ought to attain the success which we hope it will achieve.

(2.) *New York Medical Abstract. A monthly journal of condensed medical news.* Vol. I, No. 1, January, 1881.

This number contains 32 8vo. pages, with double columns. Subscription, $1 00 a year. The publication answers quite well the wants of readers who require a cheap synopsis of current medical literature. With a copious index appended to the last number, the subscriber would acquire an annual volume of solid value.

(3.) *The Homœopathic Courier.* Vol. I, No. 1, January, 1881. Pp. 64. St. Louis, Mo.

In the salutatory the editor declares that the journal is wedded to no dogma, but devoted to medicine and its allied

sciences, from a Homœopathic standpoint. Is it possible that the sacred dogma, "*Similia similibus curantur*," is repudiated? or the mysterious doctrine of potencies?

The most remarkable of the original articles is a clinical report by Prof. R. A. Phelan, M. D., of the Hom. Col. of Mo. The case was that of a young lady, who was insane for four years subsequent to an attack of sunstroke. She took a single dose of the "4000 potency" of belladonna, and for a few days her symptoms were aggravated. This lead to the supposition that the dose was too strong. In a week the doctor found his patient much more quiet, and she soon recovered completely and permanently. The single dose of the remedy had been followed by the exhibition of simple sugar of milk.

Now, admitting the correctness of the history, we submit that, either the recovery must have been spontaneous, or the cure was as miraculous as any related in the New Testament. No one calling himself Professor of any branch of Medicine has a right to explain a case like this by any of the laws that govern matter. It belongs strictly to the domain of religion, and science can take cognizance of no such events. We believe in calling things by their right names. Such teaching, such practice, are not medicine in any proper sense: call them religion, and we find no fault. We disturb no man's faith.

The selections are mostly from respectable medical journals (not homœopathic), and possess real value.

With due propriety, the title page bears the sacred image of Hahnemann, who might by this time be deified, had he enjoyed the distinction of an ignominious death.

(4) *The Illustrated Scientific News—A Record of the Sciences and their Application to the Arts and Industries.* 4to. Pp. 28. Monthly, $1 50 a year. Munn & Co. New York.

No. 4 of Vol. I, for April, 1881, is before us. The articles, both original and selected, are of decided interest and value suited to the ordinary intelligent reader. The publication ought to have an extensive circulation in families throughout the land. S. S. H.

Photographic Illustrations of Cutaneous Syphilis. By George Henry Fox, A. M., M. D., Clin. Lecturer on Dis. of Skin, Col. Phys. and Surg., N. Y., etc. Nos. 7, 8 and 9. 4to. New York: E. B. Treat. 1880.

Each number, as before, contains four plates, colored by hand, with eight printed pages.

No. 7 contains seven illustrations, as follows: Syphiloderma tuberculosum; Syph. Tuber. Crustaceum—several being duplicated.

No. 8 has six illustrations, as follows: Syphiloderma Tuberculosum; Syph. Tuber. Serpiginosum; Syph. Tuber. Ulcerativum; Terofuloderma Ulcerativum; Syph. Pustulo-crustaceum.

No. 9 has four plates illustrating Syphiloderma Gummatosum.

This series will conclude with three more numbers, and will constitute the most faithful pictures ever published of these forms of disease. S. S. H.

Lectures upon Diseases of the Rectum and the Surgery of the Lower Bowel. Delivered at the Bellevue Hospital Medical College. By W. H. Van Buren, M. D., L. L. D. (Yalen.), Prof. Prin. and Pract. Surg., Bellevue Hosp. Med. Col., etc. Second edition. 8vo. Pp. 412. New York: D. Appleton & Co. 1881. [Sold by Armand Hawkius, 196½, Canal st. Price in muslin, $3.00.]

The present edition has, to a great extent, been re-written, and is enlarged by the introduction of cases to illustrate the author's doctrines. The lectures are twelve in number, and are illustrated with 27 wood-cuts, mostly borrowed from standard authorities. As the previous edition has been favorably received, it may be expected that the present one will prove still more acceptable. The book is well printed, on good paper, in large type, and is fully indexed. On this particular branch of surgery it is undoubtedly the best work in our language.

S. S. H.

On the Antogonism between Medicines and between Remedies and Diseases. Being the Cartwright Lectures for the year 1880. By Roberts Bartholow, M. A., M. D., LL. D., Prof. Mat. Med. and Gen. Ther., Jeff. Med. Col., Phila., etc. 8vo. Pp. 122. New York: D. Appleton & Co. 1881.

The British example of courses of lectures on special subjects, sustained by a fund bestowed for the particular purpose, has

lately been imitated in this country by the bequest of the late Mr. Cartwright, of Newark, N. J., to the Alumni Association of the College of Physicians and Surgeons of New York. Prof. Bartholow was selected to inaugurate the scheme, and the lectures have already gained wide publicity by publication in several medical journals.

The subject is an interesting one, to which the author has devoted special attention, and on which he is probably better qualified than any other man in the country to speak. The six lectures of this course were delivered during the past winter, of which the first four are devoted to the antagonism of remedies, and the other two to the antagonism between remedies and diseases.

An appendix contains references to a large number of cases illustrative of the antagonism between various drugs.

The book is indexed, well printed, and neatly bound.

——— S. S. H.

A Manual of the Practice of Medicine, Designed for the Use of Students and the General Practitioner. By Henry C. Moir, M. D. 12 mo. Pp. 455. New York. 1881.

This little volume is divided into ten parts, of which the first treats of the Diagnostic Value of Rational and Physical Symptoms; the second, of the Diseased Conditions of Various Parts of the Body (classified); the third, of Prominent Symptoms of Disease Possessing a Diagnostic Value, and their Causes. The remaining parts, to nine inclusive, are devoted to special maladies, while the last part, of 48 pages, contains prescriptions alphabetically arranged with reference to therapeutical application.

The use to which this work will be put is plain—to facilitate cramming for an examination, and was in fact prepared from a course of instruction to a class preparing for a competitive examination. It is not suitable for practitioners, and should not be encouraged as a text-book to lay the foundation of a medical education. But students find such little compends convenient just before examination, and the demand creates the supply.

Coming now to the special merits of the work, we find much to commend in the first three parts, and think them well

adapted to their purpose. The six following parts attempt to cover most of the diseases actually met in practice, and in some respects they inculcate serious errors. With respect to yellow fever particularly, the faults in symptomatology and treatment are so numerous and glaring, that the article ought not to be read at all by one who is not already an adept in the disease. This might appear strange, were it not found the rule, with those who have not had personal familiarity with yellow fever; and yet every writer of a systematic treatise on medicine must try his hand at blundering. Inaccuracies are elsewhere found. Malarial fevers are said never to occur at an altitude of 1000 feet above the sea. This depends also on latitude. In the West Indies these fevers prevail as high as 2000 or 2500 feet above the sea level. The dosage of antimalarial remedies is heroic; 30 grains of quinine to interrupt a paroxysm, and Fowler's solution of arsenic pushed from 5 to 30 minims. Even in typhoid fever he recommends 30 to 40 grains of quinine within two hours; and after the third week, if the temperature be not reduced, he advises the addition of 10 to 20 grains of powdered digitalis.

The book has both table of contents and index, is well printed on superior paper, and neatly bound in muslin. S. S. H.

The Principles and Practice of Surgery, being a Treatise on Surgical Diseases and Injuries. By D. Hayes Agnew, M. D., LL. D., Prof. Surg., University of Pennsylvania. Profusely illustrated. Vol. II., 8vo., Pp. 1066. Philadelphia: J. B. Lippincott & Co. 1881. [Sold by Armand Hawkins. Price, in muslin, $7 50.]

The first volume of this, the most extensive American work on Surgery, was published about two years ago, and was very favorably received by the medical public. The third and last volume is in process of rapid preparation.

The present volume contains Chapters XI to XXIII inclusive, on the following subjects respectively: Dislocations; Diseases of the Joints; Excision of Joints and Bones; Subjects connected with Minor Surgery; General Considerations with regard to Operations; Anæsthetics; Amputation; Shock; Traumatic Fever; Furuncles, Phlegmon or Boil; Injuries and

Diseases of the Genito-urinary Organs; Surgical Diseases of Women; Surgical Affections of the Spinal or Dorsal Region; Malformations of the Head from Effusion; Surgical Diseases of the Mouth.

In regard to anæsthetics, the author, like most Northern surgeons, gives ether the preference over chloroform, but solely on the ground of safety. He remarks that the use of anæsthetics has had no marked effect on the death-rate in capital operations. At the Pennsylvania Hospital the mortality has somewhat increased, attributable, he supposes, to a graver class of injuries caused by heavy machinery and railway accidents. It is probable that desperate cases are more often operated on now than formerly, since the element of pain is abolished; consequently cases are selected with less care, and death from surgical shock is more frequent.

In the compression of arteries, he prefers the steady action of the tourniquet to digital pressure of an assistant—perhaps from unfortunate experience, though this is not the reason given. Esmarck's bandage is generally discarded, on account of the tendency to subsequent oozing of blood. Animal ligatures are generally perferred by Prof. Agnew, but he does not give his reason in this volume. The best one is, that they give way so soon as to cause no sloughing of the arterial coats; but the danger of slipping too soon is to be taken into account.

He is particular in directions for favoring drainage after operations; consequently he dispenses with adhesive straps between the sutures on stumps, and lowers the extremity of a limb to allow the fluids exit by force of gravity. As to Lister's method of dressing after amputations, he believes that it promotes rapid union, but is not satisfied that there is any gain in point of safety by carrying out the details of the antiseptic method. In this conclusion he is abundantly sustained by the success of careful surgeons, who dispense with the formalities of the spray and elaborate dressings.

In the treatment of carbuncle, the author long ago abandoned the crucial incision, except upon the face, and generally limits the local treatment to the persevering use of warm poultices and the detachment of sloughs as they form. The ten-

dency to spread he thinks may be checked by vesication extending beyond the limit of induration—of course applied early.

This author, like others, makes his guess at the riddle known as gonorrhœal rheumatism, regarding it as a septicæmic complaint; but he does not explain why this purulent infection only should select joints in preference to cellular tissue.

Unlike most writers, he finds sufficient evidence in favor of clitoridectomy as a remedy for epilepsy to justify the operation.

On the whole, we must pronounce this work a decided honor to American Surgery, a monument of the author's industry and energy. An American Treatise on Medicine, of similar scope and excellence, still remains a desideratum. S. S. H.

Books and Pamphlets Received.

The Cardiac Nerves Tabulated. By Roswell Park, A. M. M. D., Demonstrator of Anatony in the Chicago Medical School. Reprint from Annals of Anatomy and Surgery.

St. Louis Medical Society—Is Secondary Syphilis Communicable as Such? By G. M. B. Maughs, M. D., St. Louis, Mo.

Extirpation of Rectum without Destroying the Sphincter Ani Muscle. By William A. Byrd, M. D., Quincy, Ills.

Laparotomy and Colotomy with Formation of Artificial Anus for Obstruction of Intestines. By William A. Byrd, M. D., Quincy, Ills. Extract from the Transactions of the American Medical Association.

Spasm of the Intra-Ocular Eye Muscles; A Frequent Cause of Annoying and Serious Eye Defects. By Julian J. Chisolm, M. D., Professor of Eye and Ear Diseases in the University of Maryland, Surgeon in charge of the Presbyterian Eye and Ear Charity Hospital, Baltimore, etc., etc.

Remarks on Syphilis. By Walter Coles, M. D., St. Louis. Reprint from the Transactions of the St. Louis Medical Society in St. Louis Medical and Surgical Journal, January, 1881.

Hemiopia Mechanism of its Causation on the Theory of Total Decussation of the Optic Nerve, Fibres in the Optic Tract at the Chiasma (Optic Commissure). By William Dickinson, M. D., St. Louis, Mo. Reprint from the Alienist and Neurologist. St. Louis, January, 1881.

Lesson on the Prevention of the Spread of Fevers, delivered to the Ladies' Educational Society of Hastings and St. Leonard, in November, 1873.

Second Annual Report of the Board of Health of the Taxing District of Shelby County (City of Memphis) for the year 1880.

A Chirpectus of Three Different Forms of Cardiac Trophic Disease. By Roswell Park, A. M., M. D., Demonstrator of Anatomy, Chicago Medical College, etc., etc. Reprint from Southern Clinic.

Thirty-Seventh Annual Report of the New England Mutual Life Insurance Co., Boston, Mass.

Failure of Vaccination—Variolus Infection an Illusion. Vaccination an Injury to Health and a Danger to Life, and as a Protection against Small-Pox, a Vanity. By Carl Spinzig, M. D. Reprint from the St. Louis Clinical Record, February and March, 1881.

Discussion on the Memphis System of Sewerage: A Defence of the Principle of Organized Effort in the Sanitation of New Orleans. Joseph Holt, M. D., New Orleans, La.

An Improved Self-Retaining Rectal and Vaginal Speculum. By A. F. Erich, M. D., Professor of Diseases of Women, College of Physicians and Surgeons, Baltimore, etc., etc. Reprint from the Obstetric Gazette, February, 1881.

A Contribution to The Pathology of Orbital Tumors; Being a Study of the Secondary Process in the Periosteum and Bones of the Orbit and Vicinity. By Charles Stedman Bull, A. M., M. D.—Reprint from the New York Medical Journal, March, 1881.

A Statistical Report of Two Hundred and Fifty-two Cases of Inebriety. By Lewis D. Mason, M. D., Physician North Inebriate Home, Fort Hamilton, L. I., etc., etc.—Reprint from the Quarterly Journal of Inebriates.

Meteorological Summary—April.
Station—New Orleans.

Date.	Daily Mean Barometer.	Daily Mean Temp'ture.	Daily Mean Humidity.	Prevailing Direction of Wind.	Daily Rain-fall.
1	30.182	52.5	43 3	N. W.	....
2	30.287	49.0	46.3	N. E.	.....
3	30.105	57.0	87.0	East.	19
4	30.110	56.0	46.7	North	.....
5	30.095	58 0	45.3	South	.....
6	29 969	64.5	74.0	South	.....
7	29.723	69.2	91.3	S. E.	6
8	29.853	71.5	54.7	N. W.	1
9	30.141	67.5	42.3	North	.....
10	30.203	60.5	52.7	East.	.....
11	30.066	65.7	72.7	S. E.	.....
12	29.925	73.0	74.3	South	.....
13	29.917	60.2	80.0	N. W.	1.26
14	30.062	56.7	45.3	N. W.	....
15	30.050	65.2	59.0	West.	.....
16	30.172	69.2	65.0	West.	.....
17	30.159	68 2	64.7	S. E.	.....
18	30 036	70.2	78.7	South	.....
19	29.978	74 7	73.3	West.	....
20	29.971	73.5	78.3	South	.....
21	29.944	72.7	79.0	S. E.	...
22	30.011	67.0	82.7	S. E.	77
23	29.975	70.2	80.7	East.	1.55
24	30.018	73.5	80.0	S. W.	.....
25	30.001	76.0	80.3	S. W.	.....
26	29.966	72.0	85.7	S. W.	08
27	30 028	73.5	74 3	N. W	.....
28	30.070	74.7	70.0	South	.....
29	30 106	77.2	61 0	South	.....
30	30 095	76.2	71.3	East.	.....
31					
Sums	....	....	....	.....	total
Means	30.041	67.2	68.0	South	3.92

General Items.

Highest Barometer, 30.398.
Lowest Barometer, 29.672.
Monthly Range of Barometer, 726.
Highest Temperature, 84° on 29th.
Lowest Temperature, 38° on 2d.
Monthly Range, 46°.
Prevailing Direction of Wind, South.
Greatest Velocity of Wind, 22d, 39 miles East.
Total No. of miles 6,102.
Number of Clear Days, 14.
Number of Fair Days, 7.
Number of Cloudy days, 9.
No. of days on which rain fell, 7.
Dates of frost, 2d.

COMPARATIVE TEMPERATURE.

1871.....	1877..... 68°.6
1872.....	1878..... 71°.5
1873 .....67°.0	1879..... 67°.9
1874.....65°.6	1880 ..... 71°.2
1875..... 65°.3	1881..... 67°.2
1876..... 69°.1	

COMPARATIVE PRECIPITATIONS.

1871.....inches.	1876: 6.41 inches
1872..... "	1877: 4.79 "
1873..1.74 "	1878: 1.51 "
1874.13.62 "	1879: 9.17 "
1875..8.05 "	1880: 6.88 "

L. DUNNE
Sergeant Signal Service U. S. A.

Mortality in New Orleans from April 16th, 1881, to May 14th, 1881, inclusive.

Week Ending.	Yellow Fever.	Malarial Fever.	Consumption.	Small-pox.	Pneumonia.	Total Mortality.
April 23	0	7	14	0	9	113
April 30	0	4	20	0	6	136
May 7	0	3	19	0	9	137
May 14	0	3	23	1	4	160
Total....	0	17	76	1	28	546

MENSMAN'S PEPTONIZED BEEF TONIC.



The great necessity for a fluid food that would possess all the elements necessary for the support of the system having been long felt by the Medical Profession, we call attention to this preparation, containing the *entire nutritious properties* of the muscular fibre, blood, bone and brain of a healthy bullock, dissolved by aid of heat and pepsin, and preserved by spirit; thus constituting a perfect nutritive, reconstructive tonic.

It is not a mere stimulant, like the now fashionable extracts of beef, but contains blood-making, force-generating and life sustaining properties, pre-eminently calculated to support the system under the exhausting and wasting process of fevers and other acute diseases, and to rebuild and reerult the tissues and forces, whether lost in the destructive march of such affections, or induced by over-work, general debility, or the more tedious forms of chronic disease. It is friendly and helpful to the most delicate stomach, and where there is a fair remnant to build on, will reconstruct the most shattered and enfeebled constitution. It is entirely free from any drugs. Dispensed in 16 oz. bottles.

"DR. MENSMAN'S BEEF TONIC

"Is a complete representative of lean and fat beef, bone, blood and muscle. It consists of all the properties which combine in the development of the animal body, which are liquefied by an artificial process, stimulating natural digestion, and retaining all of their alimentary values. It contains in their perfection all the natural elements of the meat in their natural quantitative relations, without their extraneous or indigestible properties, and therefore requiring the least possible effort on the part of the stomach for its conversion into chyle, and its immediate absorption by the system.

"This tonic is free from any drugs or chemicals, and is a great invigorator and recuperant. I have used this preparation in several cases of sickness of a character which enables me to give the most favorable opinion of its great value, in extreme sickness. Some of the cases referred to are hemorrhage of the bowels, typhoid fever, bilious fever, inflammation of the bowels, where the greatest possible prostration was present, and in which I found this meat tonic to accomplish results I could not obtain with any other preparation. It is a gentle stimulant, and allays the peculiar irritation of the stomach, which destroys the appetite in all forms of disease, when the tone of the stomach is destroyed."

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The universal demand for Cod Liver Oil that can be depended upon as strictly pure and scientifically prepared, having been long felt by the Medical Profession, we were induced to undertake its manufacture at the Fishing Stations where the fish are brought to land every few hours, and the Livers consequently are in great perfection.

This oil is manufactured by us on the seashore, with the greatest care, from fresh, healthy Livers, of the Cod only, without the aid of any chemicals, by the simplest possible process and lowest temperature by which the Oil can be separated from the cells of the Livers. It is nearly devoid of color, odor and flavor—having a bland fish-like, and to most persons, not unpleasant taste. It is so sweet and pure that it can be retained by the stomach when other kinds fail, and patients soon become fond of it.

The secret of making good Cod-Liver Oil lies in the proper application of the proper degree of heat: too much or too little will seriously injure the quality. Great attention to cleanliness is absolutely necessary to produce sweet Cod-Liver Oil. The rancid Oil found in the market is the make of manufacturers who are careless about these matters.

Prof. Parker, of New York, says: "I have tried almost every other manufacturer's Oil, and give yours the decided preference."

Prof. Hays, State Assayer of Massachusetts, after a full analysis of it, says: "It is the best for foreign or domestic use."

After years of experimenting, the Medical Profession of Europe and America, who have studied the effects of different Cod-Liver Oils, have unanimously decided the light straw-colored Cod Liver Oil to be far superior to any of the brown Oils.

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"As an antiperiodic, Dextro-Quinine deserves a high place; and for the reduction of high temperature in zymotic diseases, I feel that we may regard Dextro-Quinine as equally efficient with the other alkaloids of Cinchona bark."

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R. O. COWLING, A. M., M. D., *Ed. Louisville Medical News, and Prof. Operative Surgery in University of Louisville.*

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☞For original articles on the clinical use of Dextro-Quinine during the year 1879, in Remittent, Intermittent and Typhoid Fevers, Pertussis, Cholera Infantum, Pneumonia, Periodic Neuralgia, etc., see communications entitled, "On the use of Dextro-Quinine."—MEDICAL AND SURGICAL REPORTER, January 25th. "Dextro-Quinine."—MEDICAL AND SURGICAL REPORTER, April 5th. "A Case of Pneumonia, etc., treated by Dextro-Quinine," etc.—MEDICAL AND SURGICAL REPORTER, December 20th. "Dextro-Quinine as an Antiperiodic."—*Ohio Medical Recorder*, March. "On Dextro-Quinine."—*New Remedies*, March. "Dextro-Quinine as an Antiperiodic."—*N. Y. Eclectic Medical Journal*, June. "Dextro-Quinine."—*Cincinnati Lancet and Clinic*, August. "On the use of Dextro-Quinine."—*Louisville Medical News*, April 5th and May 17th. "Dextro-Quinine as an Antiperiodic."—*Medical Brief*, July. "Malarial Fever of the South."—*Southern Medical Record*, August. "Dextro-Quinine in Pertussis."—*Southern Medical Record*, November. "Dextro-Quinine."—*Medical Summary*, (two articles), October. "Notes on Hospital and Private Practice."—*Pacific Medical Journal*, October. "Dextro-Quinine."—*Western Lancet* (San Francisco) December.

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FACTS FROM MISSISSIPPI AND THE SOUTH.

THE USE OF DEXTRO-QUININE IN INTERMITTENT FEVER.

Case.	Name and Sex of Patient.	Age, etc.	Number of Paroxysms before Taking.	No. of Paroxy'm after.	Dose and Mode of Exhibition.	Total amount Exhibited.	Remarks, Pathological and Physiological Phenomena, etc., etc.	Reported by
170	DA. G., male, farmer. Had taken Quinine, Cinchonidia, Arsenic and a number of different chill mixtures, prescribed by as many different doctors, besides various patent medicines; all with no result. Never had a chill after the first dose of *Dextro-Quinine.*	28	18 months regularly, all types.	0	5 grs. every four hours throughout the day, before the expected chill followed by use of ferruginous preparations.	60 grs.	This gentleman had had chills for 18 months, a relapse from a Remittent fever during the Summer. He had chills in all of its forms. Had taken Quinine, Arsenic, and several different chill mixtures prepared by as many different doctors, and various patent medicines but all to no effect, still the chill would come. When I received the sample of *Dextro-Quinine* I thought that this would be as good a case as I could get to try the merits of the preparation. I gave him 5 grs. every four hours, beginning the day before the chill was expected, and he has never had another chill from that day to this, four months. He has performed daily labor every day on the farm since that day. It is needless to say that I followed up the treatment with ferruginous preparations. I look upon the *Dextro-Quinine* as doing the work. I think it an excellent remedy and would advise all physicians to give it a trial in such cases. Sent other reports two months ago.	Jno. G. Gunn, M. D., Noxubater Miss.
171	Eve Page, female.	35	Chill every month for 3 months.	1	One 2 gr. pill every two hours till six pills or 12 grs. are taken.	24 grs.	I found nothing unusual in this case and the *Dextro-Quinine* has the reputation of breaking these chronic chills.	T. W. Wright M. D., Pickens Miss.
172	A. B., female Child		From 2 weeks to 6 months.	1	2 to 5 grains.	15 grs.	About the same as Sulphate of Quinine, except when given in large doses, does not cause the fullness of the head, and buzzing of the ears as large doses of Quinine does sometimes.	D. C. Hardman, M. D., Cherry Grove Grant County Ark.
173	A. B., male.	Adult				40 grs.		
174	Miss A. *Tertian.*	20	Regularly for 6 months.	0	Three doses of 5 grains each.	15 grs.	This case (an old chronic case) never had a chill after the first dose of *Dextro-Quinine.* I have also treated many children with like effect.	
175	Mr. X. *Tertian*	Adult	Regularly for 8 months.	0	20 two gr. pills, given as usual.	40 grs.	I gave 20 pills to an old chronic case who lived 30 miles away: and learn he never had another chill and is now well.	
176	Mrs. G., married, no children	36	7	1 Slight.	4 doses of 4 grs. each, 2 hours apart; repeated the same next day.	32 grs.	The patient could not take quinine in any form on account of the great disturbance occasioned to the stomach and head. Tried various patent medicines without result, excepting to sicken the stomach. We could not get anything to stay on the stomach until we tried *Dextro-Quinine* which acted admirably. It did not effect either the head or stomach nor has there been any return of paroxysms.	C. S Vance, M. D Marsh'l Ark.

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TUITION is by the following method:

I. DIDACTIC LECTURES—During the *Winter Session* from two to six lectures are given daily by the Faculty. Attendance obligatory.

II. CLINICAL TEACHING—Ten Clinics, covering all departments of Medicine and Surgery, are held weekly throughout the entire year in the College Building. In addition, the Faculty give daily clinics at the larger City Hospitals and Dispensaries (such as the Bellevue, Charity, New York and Roosevelt Hospitals, the New York Eye and Ear Infirmary, etc.) as a regular feature of the College curriculum. Attendance optional.

III. RECITATIONS are held daily. Attendance optional.

IV. PERSONAL INSTRUCTION—Cases of *Obstetrics* are furnished without charge. Personal instruction is given in *Practical Anatomy, Experimental Physiology, Operative Surgery, Minor Surgery, Physical Diagnosis, Opthalmology, Otology, Laryngoscopy, in Normal and Pathological Histology, and the Examination of the Urine.* Attendance optional, except upon Practical Anatomy.

EXPENSES—The *necessary* expenses are a yearly matriculation fee ($5), the fees for the lectures of the Winter Session ($20 for the course on each branch, or $140 for the entire curriculum), the Practical Anatomy fee ($10, and a small charge for material), and a Graduation Fee of $30. The graduating course requires three years' study, attendance upon two full winter courses of lectures, and upon one course of Practical Anatomy. Remissions and reductions of lecture fees are made to graduates and students who have already attended two full courses. *All fees are payable in advance.* Board can be had for from $5 to $9 a week, and the Clerk of the College will aid students in obtaining it.

For the Annual Catalogue and Announcement, or for further information, address JOHN G. CURTIS, M.D., Secretary of the Faculty, College of Physicians and Surgeons, corner of Twenty-Third Street and Fourth Avenue, New York.

jy.3m.

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THE COLLEGIATE YEAR is divided into three Sessions: A Preliminary Session, a Regular Winter Session and a Spring Session.

THE PRELIMINARY SESSION will commence September 15th, 1880, and will continue until the opening of the Regular Winter Session. It will be conducted on the plan of that Session.

THE REGULAR WINTER SESSION will commence September 29, 1880, and end about the first of March, 1881.

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In addition to the daily Hospital Clinics, there are eight Clinics each week in the College Building. Five Didactic Lectures will be given daily in the College Building, and Evening Recitations will be conducted by the Professors of Chemistry, Practice, Anatomy, Materia Medica, etc., Physiology, Surgery and Obstetrics, upon the subjects of their lectures.

THE SPRING SESSION embraces a period of twelve weeks, beginning in the first week in March, and ending the last week of May. The daily Clinics, Recitations, and special Practical Courses, will be the same as in the Winter Session, and there will be Lectures on Special Subjects by the members of the Post-Graduate Faculty.

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FEES:

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It has come to our knowledge that certain articles extensively advertised as "pure" and "genuine extract of malt," are composed chiefly of the

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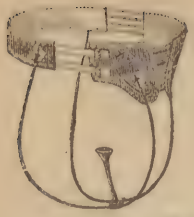
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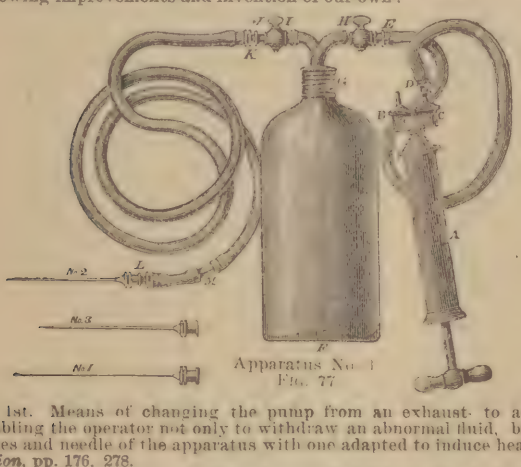
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FIG. 77



FIG. 78. The Stopper and Cocks supplied with apparatus No. 2.

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PROFESSORS:

JOSEPH PANCOAST, M. D.,
General, Descriptive and Surgical Anatomy, (Emeritus.)

S. D. GROSS, M. D., LL. D., D. C. L. Oxon.
Institutes and Practice of Surgery.

ELLERSLIE WALLACE, M. D.,
Obstetrics and Diseases of Women and Children.

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Materia Medica and General Therapeutics.

HENRY C. CHAPMAN, M. D.,
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CLINICAL INSTRUCTION is given *daily* at the HOSPITAL OF THE JEFFERSON MEDICAL COLLEGE throughout the year by members of the Faculty, and by the Hospital Staff, which is constituted as follows:

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S. W. GROSS, M. D.,
R. J. LEVIS, M. D.

Opthalmic Surgeons.

PROF. WILLIAM THOMSON, M. D,

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Gynæcologists.

F. H. GETCHELL, M. D.,
J. EWING MEARS, M. D.

Pathologist.

MORRIS LONGSTRETH, M. D.

A SUMMER COURSE of Lectures is given, beginning on the fourth Monday in March, 1881, and extending through the months of April and May, and to the middle of June. There is no additional charge for this Course to matriculates of the College, except a registration fee of five dollars; non-matriculates pay forty dollars, thirty-five of which, however, are credited on the amount of fees paid for the ensuing Winter Course.

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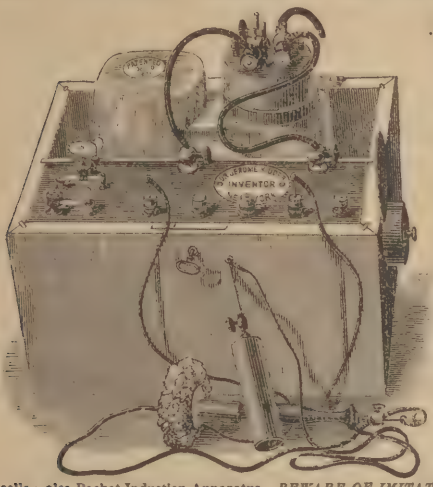
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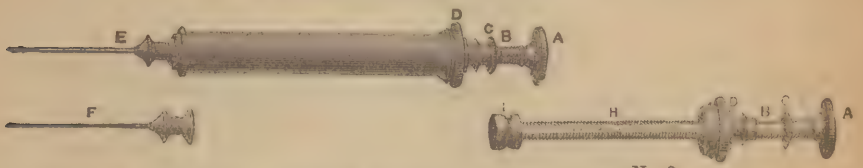
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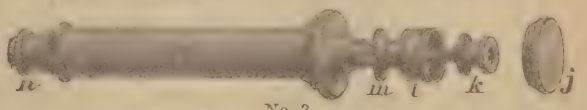
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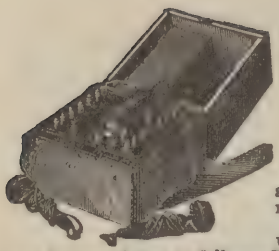
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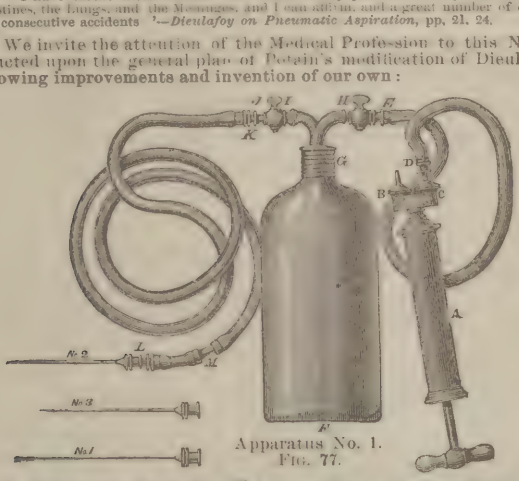
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FIG. 77.



FIG. 78. The Stopper and Cocks supplied with apparatus No. 2.

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PROF. L. P. YANDELL, in *Louisville Medical News, Jan. 3rd*, 1880:—MALTINE is one of the most valuable remedies ever introduced to the Medical Profession. Wherever a constructive is indicated, MALTINE will be found excellent. In pulmonary phthisis and other scrofulous diseases, in chronic syphilis, and in the various cachectic conditions, it is invaluable.

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FIRST:—That Maltine (Plain) increases weight and strength far more rapidly than Cod Liver Oil or other nutritive agents.

SECOND:—That Maltine with Peptones, and Maltine with Pepsin and Pancreatine rapidly correct imperfect digestion and mal-nutrition in wasting diseases.

THIRD:—That Maltine is the most important constructive agent now known to the Medical Profession in Pulmonary Phthisis.

FOURTH:—That Maltine causes an increase in weight and strength one and a half to three times greater than any of the Extracts of Malt.*

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MALTINE with Alteratives.
MALTINE with Beef and Iron.
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MALTINE with Cod Liver Oil and Iodide of Iron.
MALTINE with Cod Liver Oil and Pancreatine.
MALTINE with Cod Liver Oil and Phosphates.
MALTINE with Cod Liver Oil and Phosporus.
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MALTINE with Peptones.
MALTINE with Pepsin and Pancreatine.
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Satisfactory therapeutical results from the administration of Salicylic Acid in the treatment of Gout, Neuralgia, Rheumatism, Sciatica, etc., etc., have been much modified by the disturbance of the general system, especially the stomach, owing to the large doses required.

Medical men have experimented with the salts of this acid, hoping to qualify this tendency. That most largely used (the Salicylate of Soda) has proven much less objectionable than the acid itself, but long continued use results in the same trouble to the class of patients with whom freedom from nausea and internal irritation is a first necessity.

Being convinced that the acid would be best prescribed in combination with some other base, it was suggested by Mr. F. H ROSENGARTEN, of Messrs. Rosengarten & Sons, that the salt of a Cinchona Alkaloid would aid the remedial properties of the Salicylic Acid, in adding tonic, stimulant and anti-periodic properties, and with such a powerful alkaloid as Cinchonidia, the dose required could be lessened.

This salt opens up a wide range of uses in conditions where, heretofore, physicians have not tested Salicylic Acid, for fear of direct debility and loss of muscular power so often induced by its use.

Practical experience has borne out the above theory quite fully; and in a number of cases of severe Neuralgia and acute Rheumatism, the Salicylate of Cinchonidia has given immediate relief in doses of five to ten grains, where Quinine, Salicylic Acid, or other general treatment has failed.

Since the introduction of this salt, it has been tried in the Jefferson Medical College Hospital at Philadelphia; St. Joseph's Hospital at Philadelphia, and by a number of careful practitioners, with immediate good effect in every case, so far as heard from; in fact, better results than could have been anticipated.

It is administered in five grain doses, until the paroxysms of Neuralgia cease. This generally requires, say from fifteen to twenty grains, five grains every two hours. The salt, representing about one-third of its weight of Salicylic Acid, is almost insoluble in water, and is incompatible with iron solutions. We urge its trial in all cases of acute articular Rheumatism, Gout, Neuralgia, Sciatica, etc., etc., with almost absolute certainity of prompt relief. Owing to its insolubility, it cannot be given in solution, and physicians will find the nearest approach to this, in the administration of our Compressed Powders or Pills. These being free from coating, must necessarily disintegrate more quickly than a coated pill.

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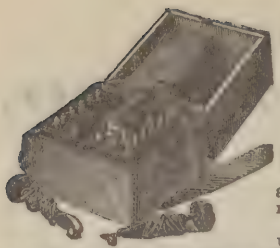
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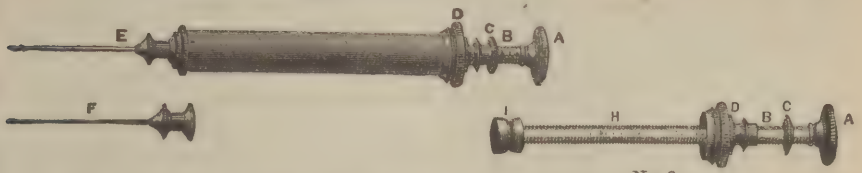
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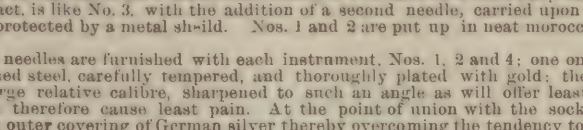
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New Orleans, June 1, 1881.

S. M. BEMISS, M. D.
W. H. WATKINS, M. D. } *Editors and Prop's.*
S. S. HERRICK, M. D.

VOL. VIII JULY, 1880. No. 1.

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EDITED BY

S. M. BEMISS, M. D.,

W. H. WATKINS, M. D. S. S. HERRICK, M. D.

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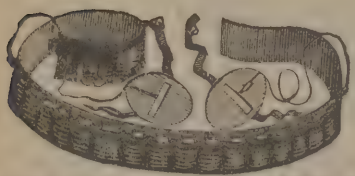
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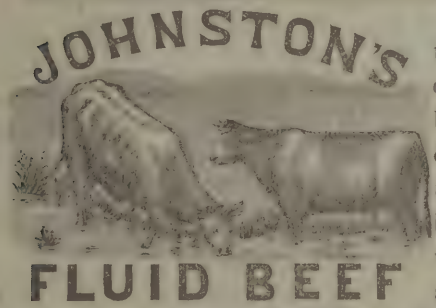
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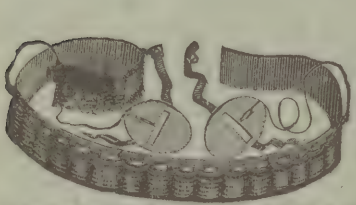
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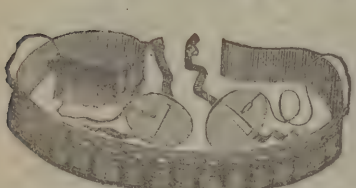
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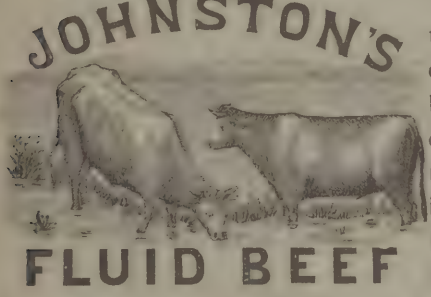
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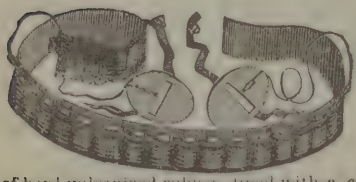
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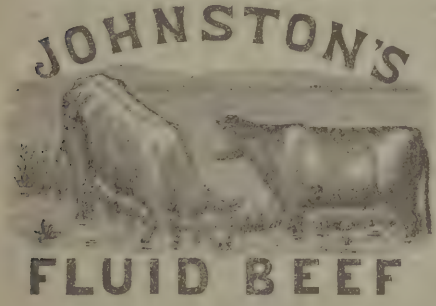
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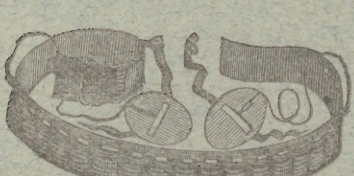
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